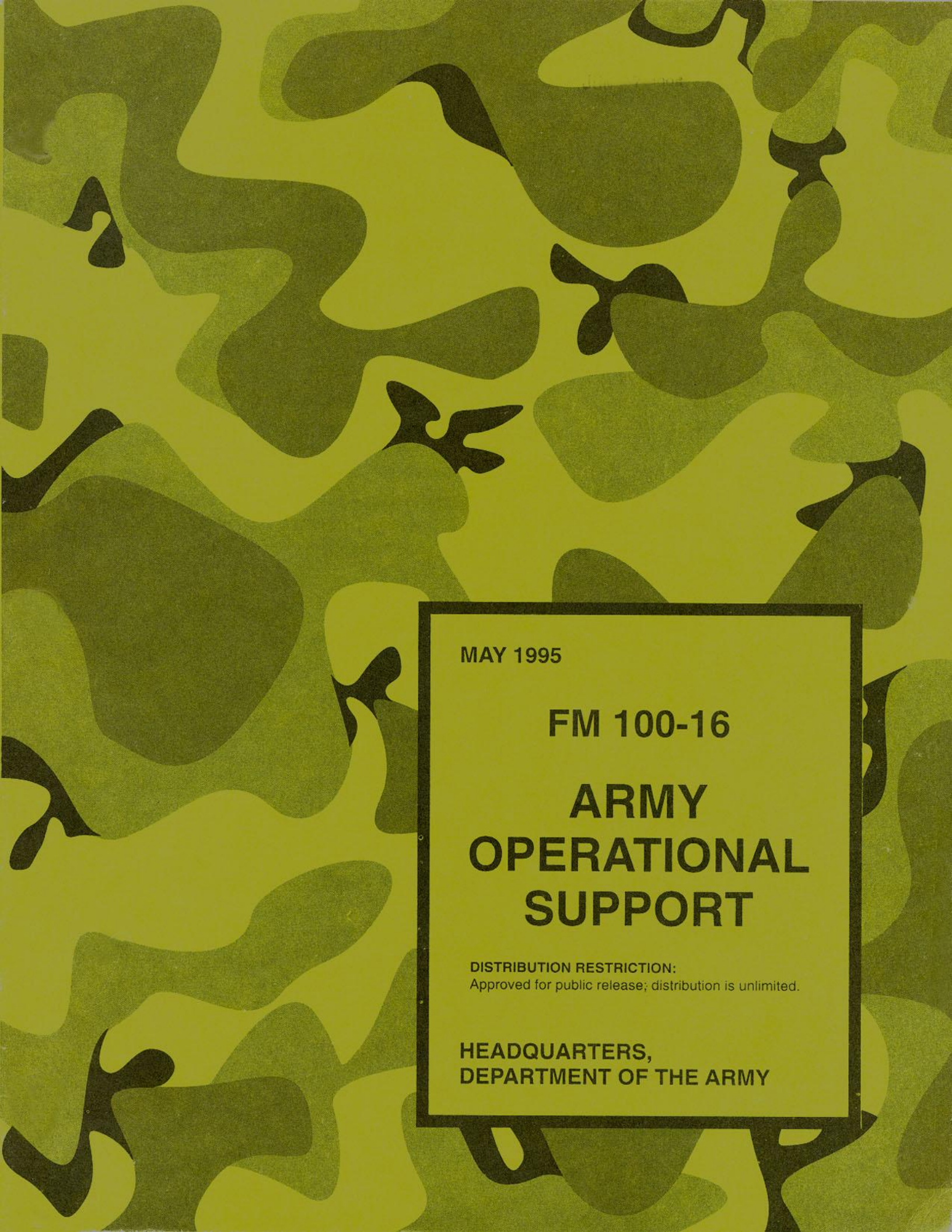

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ARMY OPERATIONAL SUPPORT

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Army Operational Support

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Preface

The fundamental purpose of the US Army is to support and defend the Constitution of the United States. It does this by deterring war and, if deterrence fails, by providing Army forces capable of achieving victory on and off the battlefield. To accomplish this mission, the Army must maintain trained and ready forces capable of rapid deployment. If deterrence fails, the Army must repel or defeat a military attack and end the conflict on terms favorable to US and allied interests. The ability to accomplish this is based upon sound planning—strategic, operational, and tactical—with support planning as a critical part of each.

This manual provides operational-level support doctrine for Army service component commanders (ASCC), Army forces commanders, and other senior leaders and their staffs employed in joint, combined, or interagency circumstances across the scope of military operations. The ASCC establishes a plan for support of United States corps or other Army operational elements based on priorities established by the combatant commander.

This manual implements relevant doctrine from joint publications, especially Joint Publication 4.0, and is fully compatible with the Army's operations doctrine as contained in FM 100-5, FM 100-7, and FM 100-8. It also links FM 100-10, FM 100-17, and other support doctrinal manuals.

The proponent of this manual is HQ TRADOC. Send comments and recommendations on DA Form 2028 directly to Commander, US Army Training and Doctrine Command, ATTN: ATDO-A, Fort Monroe, VA 23651-5000.

Unless this publication states otherwise, masculine nouns or pronouns do not refer exclusively to men.

introduction

The mission of the United States Army is to deter war and, if deterrence fails, to fight and win. The Army, along with other services, civil agencies, and nations, must be able, when called upon, to defend and promote national and collective security interests throughout the world. The massing of combat power relies on the Army's ability to mobilize, deploy, sustain, reconstitute, and redeploy a crisis response force and reinforcing forces. It must also be able to project forces from CONUS or forward presence locations in response to requirements from the National Command Authorities (NCA). This combat power, in conjunction with joint and/or multinational forces, must have the strategic ability to mass a decisive force or render quick assistance to end a crisis swiftly. Forces will be provided to supported theater combatant commanders and subordinate joint task force (JTF) commanders who are responsible for planning and executing campaigns or operations within their theater and operational areas.

Logistics is the process of planning and executing the movement and sustainment of operating forces in the execution of military strategy and operations. It is the foundation of combat power—the bridge that connects the nation's industrial base to its operating forces. Logistics is basic to the ability of operating forces to initiate and sustain missions across the range of military operations.The threat to our nation will come from many different sources having a wide range of weapons, tactics, training, and political motivation. High degrees of weapon system lethality and mobility can generate devastating losses and require challenging solutions in the areas of doctrine, training, leader development, organization, materiel development, and soldiers.

In such circumstances, the role of logistics and support capabilities at the operational level—to develop and sustain combat power while exercising operational art—takes on even greater importance. Operational-level Army commanders must establish and/or coordinate support functions to allow tactical commanders to focus their attention on the battle rather than on support activities. Support organizations are tailored to support the ASCC's plan in either a mature or immature theater. The theater-of-war base and the theater-of-operations forward operating bases provide both strategic and operational support, respectively, to the tactical support bases.

Operational logistics and support activities support the force during subordinate campaigns and major operations within a theater of operations. Support of the force at the operational level extends from the theater of operations support bases to forward logistics elements and facilities organic to tactical formations. In performing support functions, the theater of operations forward operating bases within the communications zone (COMMZ) link strategic logistics to tactical logistics.

At the operational level, the familiar distinction between *operations* and *support* begins to erode. Planning support is synonymous with operations and becomes a significant undertaking of the ASCC and his staff. Operational support differs from tactical support by the longer planning and preparation time required to sustain extended operations. Support of the force includes balancing current consumption with the need to build up support for

subsequent major operations, lengthening lines of communication (LOC), and staging other combat support and combat service support forward as required to sustain the tempo of operations.

As the commander in chief (CINC) develops his strategic concept of operation, he concurrently develops a concept of support in coordination with his ASCC. CINCs and their staffs consider a myriad of support factors, including logistics priorities, that affect the ability of the operational forces to conduct operations. At the campaign and major operation planning levels, support can be a dominant factor in determining the nature and tempo of operations. Sound support planning and analysis allow for rapid changes to operation plans.

Operational-level leaders must determine the proper balance between centralized planning and decentralized execution of support functions and responsibilities. Too much centralization often results in rigidity and sluggish response, while too little often causes waste and inefficient use of critical resources. Centralizing functions to avoid unnecessary duplication is not always justified. Limited duplication may be beneficial and necessary for adequate flexibility and mobility. However, centralized management and planning prevent optimization of support functions and activities. Decentralized execution is important to carrying out effective planning. Smaller operating units tend to be more flexible and responsive than larger ones. The ASCC's staff helps leaders to focus by providing broad policy direction and coordinating functions both internally within the component and externally with joint, combined, interagency, nongovernment, private voluntary, United Nations, and host nation (HN) agencies.

PART ONE

Support: The Key To Operational Success

As part of a joint team, Army forces are central to the theater campaign. In today's force projection Army, planning and executing major operations to support a theater campaign are formidable tasks. Conditions are increasingly uncertain in a theater strategic environment with ambiguous and ever-widening threats. To assist the unified/combatant CINC in meeting these diverse threats, Army forces offer commanders a range of choices and options for designing theater strategy and campaigns. The challenge to an operational-level commander is to shape the military environment and set the conditions for unqualified success in all major operations. Success means decisive victory or achieving the desired political end state, whether in war or military operations other than war (MOOTW).

Chapter 1

Supporting Army Operations In Theater

Operational tempo toward achieving the CINC's strategic intent is maintained through the simultaneous application of combat, combat support (CS), and combat service support (CSS). The Army operational commander and his staff must develop comprehensive support plans focusing on the capabilities and integration of joint, interagency, and combined assets to achieve the desired operational effect and strategic results. Support at the operational level encompasses the integration of CSS assets, some combat arms organizations, and all army combat support assets in theater according to the CINC's priorities and strategic objectives. This requires the Army operational commander to integrate his allocated resources--communications, intelligence, military police (MP), engineer, civil affairs (CA), psychological operations (PSYOP), nuclear, biological, or chemical (NBC) defense and smoke operations, supply and services, transportation, maintenance, medical, personnel, air defense (AD), and aviation—into his vision of operational battle space in consonance with the theater commander's strategic vision. The support portion of his battle space and the understanding of the higher intent encompass his own area of operations, the theater, and LOC, which will extend back to his rearmost support base but may also encompass the industrial infrastructure.

THE COMMANDER'S VISION OF SUPPORT

Today, the Army contributes to the effectiveness of our nation's responsiveness by maintaining versatile forces organized, trained, and equipped to operate across the entire range of operations in war and MOOTW. To this end, one of the ASCC's most important responsibilities in theater operational areas on the behalf of the theater commander is to provide his forces joint and multinational force as required with effective and efficient support.

This support provides the resources to produce and support combat power in conjunction with the theater concept of operation. In other words, operational support is likewise theater strategic support and one of the key ingredients in planning and executing successful campaigns and major operations.

As the operational-level commander, the ASCC's over-arching vision of his operational area melds support, combat operations, and MOOTW into an inseparable combination. Through the exercise of battle command, the ASCC achieves the synergy required for successful simultaneous operations in depth.

In planning for simultaneity, the ASCC must understand that the army is part of a joint or unified force. The projection of army forces into theater relies on joint and multinational support in consonance with the theater commander's deployment priorities and the ASCC's recommendations. The availability of this support in the form of aircraft, ships, in-theater stocks, supplies from CONUS or another theater, and HN capabilities will affect both the CINC and subordinates' sequencing of units and the tempo of operations. Measures taken to achieve unity of effort and mutual trust with other nations—such as peacetime training exercises, interoperability, well-understood battle command structures, liaison, and interpreters—greatly facilitate future operations.

The ASCC may find other governmental and nongovernmental agencies in theater. These agencies can act as force multipliers when the CINC delegates coordinating authority to the ASCC and his staff. Like army operations, agency operations may extend throughout the entire theater and may stretch back to CO NUS. Plans must consider including, not excluding, these valuable organizations. The CINC may direct the ASCC to assist other agencies; his responsibility for support operations may not be confined to one operational area.

Whether in war or MOOTW, split-based operations are likely. As battle space expands, the ASCC will be pulled by the equal demands of support and operations. While exercising battle command over maneuver forces, he must simultaneously track forces and equipment from mobilization stations to an intermediate staging area, if used, through the theater base and into the area of operations (AO). During this movement of forces and equipment, total asset visibility (TAV) and continuous force tracking allow the operational-level commander to exercise battle command. Establishing communications throughout his battle space allows the operational-level commander to allocate arriving forces at the point where they will have the most impact.

HISTORICAL PERSPECTIVE

Operation Desert Shield/ Desert Storm was a significant accomplishment for the Army. A key to this accomplishment was logistics that sustained the operational tempo by providing support where it was needed, when it was needed. Although logistics support was generally executed in accordance with current doctrine, some initial problems occurred in dealing with the mass quantities of equipment and supplies flowing into the theater. As port facilities became clogged and irretrievable decisions made during the mobilization and deployment phases identified, support appeared to have a negative impact on operational tempo.

Improvising a solution on the ground, the ASCC formed the Army Central Command Support Command. Active and reserve component soldiers and Department of the Army civilians comprised the 22d Support Command (SUPCOM). At the peak of the operation, more than 75 percent of the soldiers were from the reserve components.

The 22d SUPCOM outlined an initial plan with three major tasks: reception, forward movement, and sustainment of all soldiers, equipment, and supplies moving into the theater. During the reception and movement phase alone, 22d SUPCOM units off-loaded more than 500 vessels and received more than 9,000 aircraft. The cargo amounted to more than 12,400 tracked vehicles, 114,000 wheeled vehicles, 1,800 Army aircraft, 33,000 containers, 1,800,000 short tons of cargo, 300,000 short tons of

Whether mobilizing for war or MOOTW, the operational-level commander tailors a force package to meet operational support requirements. Much of the operational-level CSS support structure is in the reserve components. Therefore, an MOOTW mission may require planners to build a support structure from available active component forces or through integration of reserve component forces made available from The National Guard and the Army Reserve, and in harmony with other present government and nongovernmental agencies.

In MOOTW, support forces may outnumber other friendly forces on the ground. While the basic mission of support forces remains the same across the range of military operations, the mission may dictate that the deployed support forces be the operation's main effort. Deployed combat forces may be limited to protecting support facilities, in which case, the ASCC must be even more cognizant of the strain this will impose on his battle command. Determining the correct force mix is essential to mission success.

PRINCIPLES FOR SUPPORTING CAMPAIGNS AND MAJOR OPERATIONS

Support operations are designed and protected so they continue to sustain forces throughout a war or MOOTW, adapting as conditions change. At the operational level, support can be a dominant factor in determining the nature and tempo of operations. Support furnishes the means to execute the operational and theater strategic concepts. In this regard, a set of "first principles" form the basis for the ASCC to provide support to his forces during the course of a theater or subordinate campaign: operations and support integration; operational intelligence preparation of the battlefield (IPB); connectivity; logistics preparation of the theater; and force protection. Details of these principles are found in Parts II, III, and IV of this manual.

OPERATIONS AND SUPPORT INTEGRATION

The integration of support concepts and operations with the ASCC's operational plan is a prerequisite to conducting successful major operations during the course of a campaign. While this integration will not guarantee theater strategic and operational success, victory is not possible without adequate support. An important step in the parallel planning process, which fosters the integration

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ammunition, and 350,000 personnel. Simultaneously, the support command supplied portions of the XVIII Airborne Corps, which had arrived prior to the establishment of an infrastructure. They also planned future operations, including the movement and sustainment of two corps.

The task of moving two corps to their attack positions was an equally notable accomplishment. For example, in a single corps were more than 7,000 tracked vehicles and more than 40,000 wheeled vehicles, requiring 1,300 HETs, 450 lowboys, and 2,200 flatbeds for transportation.

These tasks could not have been accomplished if not for the SUPCOM's innovative force tailoring and the donations and loans of equipment from Europe, Japan, and Egypt and host nation assets. The uninterrupted lines of communication, coupled with the efforts of combined partners and the joint cooperation of sister services, allowed the SUPCOM to get combat forces where the operational-level commander needed them in an expeditious manner.

In addition to demonstrating the magnitude of activity the ASCC must incorporate into his vision of battle space, this example represents the total force at its finest. The enemy's passive attitude and inability to disrupt the logistical buildup gave the Army time and space to accomplish the support mission. As a power projection force with increased possibility of fighting a more aggressive enemy, the ASCC must ensure planners consider the "first principles" for supporting campaigns and major operations.

of operations and support, is the development of thorough staff estimates that compare the support capabilities required with the available assets. These assets are not limited to Army assets, but include joint and strategic assets available to the ASCC. The end result of these estimates is an accurate visualization of the current enemy and friendly situation, a succinct mission statement, a well-articulated statement of the ASCC's operational intent, and a clear expression of support alternatives. These alternatives will consist of tailored support packages that meet the ASCC's operational intent and the needs of his forces. By determining the capability to meet the totality of support requirements within the theater, the ASCC can accomplish two critical tasks: determine feasible courses of action for the campaign or major operation and build flexibility into his operational plan to shift priorities of effort, if and when this becomes necessary.

OPERATIONAL IPB

Operational IPB is a key tool available to the ASCC and his planners in determining feasible courses of action (COAs) and developing a concept for each major operation of a campaign. IPB at the operational level aids in identifying how to attain assigned military objectives based on the assessment of enemy capabilities, intentions, and vulnerabilities. These military objectives are the basis for determining intelligence requirements to support the operation. Intelligence planners develop a collection plan that assigns these requirements to the various joint and combined intelligence systems in the theater—systems that concentrate on collecting information, analyzing that information, and disseminating it in a timely manner.

Forces deploying into a theater during the early stages of an operation must have accurate, detailed, and timely intelligence to enhance their survivability, lethality, and overall effectiveness, Besides having an accurate picture of the enemy and terrain throughout the ASCC's battle space, these early deploying forces must obtain intelligence that addresses the significant political, economic, industrial, demographic, cultural, and psychological features of the operational area. Thus, the ASCC must include how to satisfy his overall intelligence requirements for the mission in the force tailoring considerations, either by providing early arriving intelligence units, ensuring connectivity with national assets, or both.

CONNECTIVITY

Effective communications and computer systems that ensure connectivity throughout the ASCC's battle space are vital to planning, mounting, and sustaining a successful major operation. Operations, CSS, and intelligence all depend on responsive systems that tie together the various aspects of joint and multinational operations. The ASCC must maintain an unbroken chain of rapid, reliable, and secure communications with his subordinate commanders and the combatant CINC during all phases of a campaign. To perform his battle command responsibilities, the ASCC needs home-station, en-route, and in-theater communications means that are secure, reliable, and timely. These means must also be compatible with the mix of supporting forces and services within the region, including civilian agencies of the United States government.

LOGISTICS PREPARATION OF THE THEATER

Logistics preparation of the theater base and the COMMZ is a key tool available to the ASCC and his planners in building a flexible theater strategic operational support plan. It consists of the actions taken by logisticians at all echelons to optimize means—force structure, resources, and strategic lift—of logistically supporting the ASCC's plan. These actions include identifying and preparing forward operating bases; selecting and improving LOC; projecting and preparing forward logistics bases; and forecasting and building operational stock assets forward and afloat. They focus on identifying the resources currently available in the theater for use by friendly forces and ensuring access to them. A detailed logistics estimate of requirements, tempered with logistics preparation of the theater, allows the command logistician to advise the ASCC and the CINC of the most effective method of providing support that will

not overwhelm the force or fail to provide adequate, timely support.

More often than not, the identification and preparation of an initial lodgment or support base will have a major influence on the course of the campaign. Lodgments should be expandable to allow easy access to strategic sealift and airlift, offer adequate space for storage, facilitate transshipment of supplies, and be accessible to multiple LOC. Thus, lodgments are often established near key seaports and airports in the theater. Logistics-over-the-shore (LOTS) operations may augment undeveloped or damaged facilities or provide ports where none exist. Conducting LOTS operations from anchorages becomes more important if the enemy has the capability to deliver long-range, highly destructive fires. Split-based operations are often a requirement during the establishment of an initial lodgment. Enhanced communications permit the accomplishment of certain logistics management functions from CONUS or horn a forward presence location, requiring the deployment of only those capabilities that are absolutely necessary. This concept of split-based operations was used quite successfully in 1993 by the JTF SUPCOM during the initial stages of Operation Restore Hope in Somalia. Then, the JTF SUPCOM commander was certain that priority electronic transmissions could be sent back and forth between a forward material management center (MMC) cell in Somalia and the CONUS (home station) MMC supporting the operation from Fort Hood. By relying on split-based operations, the JTF SUPCOM commander reduced the quantity of support resources that had to be stockpiled forward.

Seldom will an initial lodgment or support base contain the ideal mix of desired characteristics. The ASCC must make difficult choices when organizing support for the theater of operations. One of the most difficult is whether to stockpile supplies forward in the theater or rely on "just-in-time" throughput from CONUS or an intermediate staging base. For example, stockpiling places supplies in relatively close proximity to units in the combat zone (CZ), but may place a burden on the theater support structure in terms of having to move, protect, and handle large quantities of support resources on a repetitive basis. On the other hand, while just-in-time throughput reduces this burden significantly, it is highly dependent on the availability and responsiveness of limited airlift assets to deliver critical supplies in a timely manner to ensure that fighting forces are able to sustain the desired operational tempo. The ASCC must weigh the risks and benefits of both of these options and then decide which can best fulfill the support requirements of his operations plan. Depending on the mission, enemy, terrain, troops, and time available (METT-T) factors, the ASCC may transition from one option to the other or adopt a combination of both.

The selection and improvement of LOC are essential aspects of maintaining uninterrupted logistics support throughout all phases of an operation or campaign. The operational commander must understand the relationship between stockpiles, time, LOC, and forward combat power. Time spent in deliberate preparation—projecting and preparing forward logistics bases and stockpiling resources in them-can result in shorter LOC

HISTORICAL PERSPECTIVE

General MacArthur's decision to continue with the X Corps' Wonsan landing despite ROK I Corps' capture of the port on 10 October was to have logistics repercussions Eighth Army. For the first half of October, nearly all the Inchon port facilities were busy loading out the 1st Marine Division and unable to off-load ships for Eighth Army. Therefore, supplies had to continue to come all the way from Pusan. Levels of stocks were at times reduced to one day's supply. This situation continued until after mid-November. Eighth Army needed 4,000 tons of supplies a day for offensive operations, and this level of supply was not achieved until 20 November. Lieutenant General Walker was forced to advance into North Korea with only I Corps, leaving IX Corps behind until the logistical situation improved.

and greater operational capability in the future. This was the case in Operations Desert Shield and Desert Storm where bases were positioned forward as part of the CINCs strategic concentration to support future operations. On the other hand, the age-old problem of overextended LOC and supply shortages can have a detrimental impact on a large force trying to conduct offensive operations. Eighth Army operations in Korea during the fall of 1950 are an example of what can happen when this problem occurs.

The ASCC has certain support responsibilities that derive from his position in the chain of command. In one case, the CINC directs how the ASCC will furnish logistics support for the benefit of the joint force. For example, he may task the ASCC to furnish the military police (MP), medical evacuation (MEDEVAC), medical, communications, intelligence, civil affairs (CA), or psychological operations (PSYOP) support for the joint force. The ASCC is also the sole provider of the theater logistics command and control (C^2) and infrastructure. In another case, regardless of the command arrangements within the theater, the ASCC retains responsibility for certain service-type functions such as furnishing logistical support and supply Classes I, HI, V, and VIII for all forces in the theater, including procurement, distribution, supply, equipment, and maintenance.

FORCE PROTECTION

One of the ASCC's most important responsibilities is to conserve the fighting potential of his force so that it can be applied at the decisive time and place. Operational protection includes protecting the force from enemy air, ground, and sea attack. In safeguarding operational forces, the ASCC constructs significant fortifications, conducts electronic counter-countermeasures (ECCM), integrates air defense coverage, implements NBC defensive measures, and conducts rear operations. Since operational maneuver and the exploitation of tactical success often depend on the adequacy of a force's sustainment capability, the ASCC must mass, economize, and secure rear forces with much the same thought process that goes into the maneuver of combat units. The CINC may designate the ASCC as the joint rear area coordinator (JRAC), thereby giving him responsibility for coordinating and maintaining the overall security of the joint rear area (JRA) as directed. The JRAC is a critical link in coordinating security, establishing intelligence and counterintelligence support, and establishing communications with all forces in the JRA. The JRAC creates a secure environment in the JRA to facilitate sustainment, host nation support (HNS), infrastructure development, and joint force movements. He is also responsible for providing intelligence support for the JRA and establishing sufficient communications to accomplish his tasks, planning for the reality that the JRA will not be contiguous with the CZ. One task that the JRAC must not overlook is his requirement to coordinate closely with the area air defense commander (AADC) who has operational control of the theater army air defense assets. This coordination is essential because air defense at the operational level is concerned primarily with protecting the theater base with its critical points and facilities—ports, key bridges, operational C^2 facilities—in the COMMZ and forces moving through the COMMZ.

Chapter 2

Theater Organization Structure

Theater commanders provide strategic and operational direction. They develop a theater strategy, organize their theaters, and establish command relationships for effective joint operations. Army commanders—particularly at the operational level-operate with other services, government agencies, and multinational forces, requiring a thorough understanding of the chain of command, theater organization, and the Army support structure as they contribute to the unified structure. Combatant commands (COCOMs) and theaters form the structure for this environment.

THEATER ORGANIZATION

The Unified Command Plan (UCP) contains criteria for establishing a unified theater based on national security strategy, national military strategy, geography, and history. However, a key consideration for establishing a theater is its strategic objectives. Theater commanders are charged with providing strategic direction and operational focus to subordinate commanders. They develop a theater strategy and campaign plans; organize their theaters; establish command relationships for effective unified, joint, and multinational operations; and conduct unified operations that ensure a united effort within the command.

Unity of effort requires that one responsible commander focus resources toward obtaining defined objectives and strategic end states. This principle gives a single unified commander responsibility for all military operations within a designated theater-strategic environment across the range of military operations. The NCA authorizes unity of effort among the military services at the strategic level; it is exercised through the CINCs, the service secretaries, and JCS.

THE CHAIN OF COMMAND

The Goldwater-Nichols DOD Reorganization Act of 1986 prescribes the chain of command. Two distinct branches of the NCA exercise authority and control of the armed forces through the chain of command. The first flows from the President to the Secretary of Defense (SECDEF) to the combatant commanders for missions and forces assigned to their commands. The second flows from the NCA to the secretaries of military departments to the chiefs of the service forces for execution of service functions.

Commanders of COCOMs are responsible to the NCA for the preparedness of their commands and execution and accomplishment of assigned missions. The secretaries of military departments are responsible for organizing, training, equipping, and providing forces. The authority exercised by the military departments is subject by law to the authority provided to the combatant commanders.

The DOD Reorganization Act placed the Chairman, Joint Chiefs of Staff (CJCS) within the chain of command to communicate the NCA's directions. Though the CJCS does not exercise military command over any combatant forces, all communications between the NCA and combatant commanders pass through the CJCS. Figure 2-1 depicts the chain of command.

National Command Authorities

The NCA, consisting of the President and the SECDEF or their authorized alternates, exercise authority and control over the armed forces through a single chain of command with two distinct branches. One branch originates with the NCA and continues through the CJCS directly to the combatant commanders for

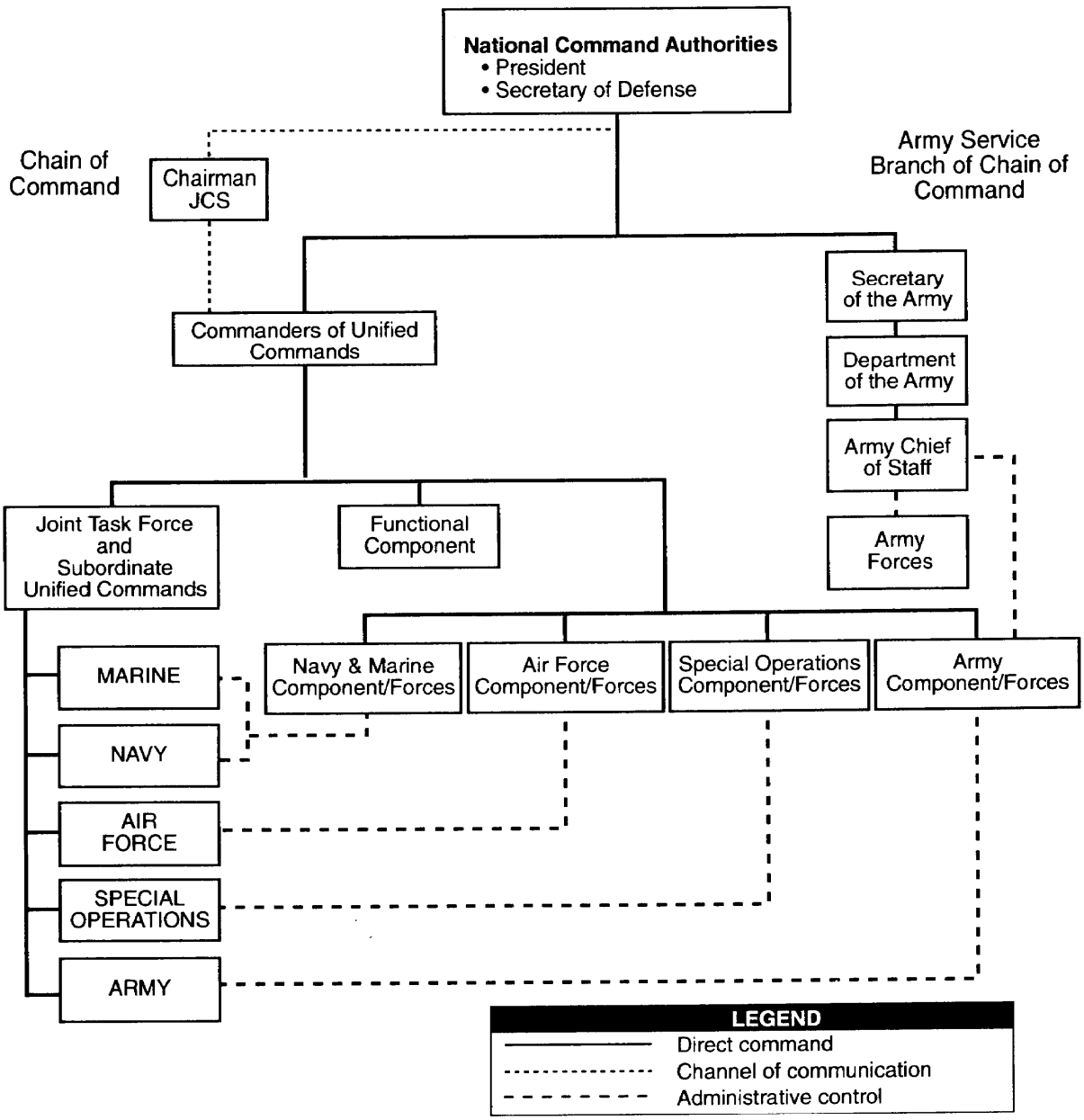


Figure 2-1. The Chain of Command

missions and forces assigned to their commands. The other, used for purposes other than operational direction of forces assigned to the COCOMs, flows from the NCA to the secretaries of the military departments.

Chairman Of The Joint Chiefs Of Staff

The Goldwater-Nichols DOD Reorganization Act clarified the role of the CJCS, establishing his primary authority and placing him in the decision-making process. The CJCS functions under the authority, direction, and control of the NCA and oversees the activities of the combatant commanders as directed by the SECDEF. AH communications between the NCA and combatant commanders pass through the CJCS.

Combatant Commands

COCOMs are commands with a broad and continuing mission under a single commander. They are established and designated by the President, through SECDEF, with the advice and assistance of the CJCS. COCOM

commanders receive strategic direction from the NCA through the SECDEF and the CJCS and are responsible to the NCA for the performance and the preparedness of their commands to execute assigned missions.

Military Departments

The military departments operate under the authority, direction, and control of the SECDEF. Through the service chiefs, the secretaries of the military departments exercise authority, direction, and control of their forces that are not assigned to combatant commanders. This branch of the chain of command is separate and distinct from the branch that exists within the COCOM. The secretaries of the military departments are responsible for the administration and support of their forces assigned or attached to COCOMs. They fulfill these responsibilities by exercising administrative control (ADCON) through the commanders of service component commands assigned to the COCOMs. Using ADCON, the ASCC is responsible for preparing, maintaining, training, equipping, administering, and supporting Army forces assigned to the COCOMs. The emphasis of the military departments is the administrative (legal, personnel, finance) and logistical support to respective service forces.

COMMAND AUTHORITY

The commander's authority must be commensurate with command responsibility. *The Goldwater-Nichols DOD Reorganization Act of 1986* places clear responsibility on the CINCs of COCOMs to accomplish the missions assigned to their commands. Title X, *United States Code* (USC), vests CINCs with command authority called *combatant command.* Among the types of authority that may be granted to operational commanders are operational control (OPCON), tactical control (TACON), and support. Coordinating authority, ADCON, and direct authority can be delegated to his subordinate commanders; however, this authority is a consultation relationship, not a command relationship.

Combatant Command

COCOM is command authority over assigned forces granted only to commanders of COCOMs (CINCs) by Title X, *USC,* Section 164, or as directed by the President in the UCP. Not transferable, COCOM provides command authority and unity of command within the theater. It allows the CINC to perform various functions, including organizing forces and employing commands and forces, assigning tasks, designating objectives, and authoritatively directing all aspects of military operations, joint training, and support necessary to accomplish the command's assigned mission. During contingencies, COCOM can be expanded to allow the combatant commander to reorganize service component forces as necessary and consolidate CSS within the command.

Combatant commanders exercise COCOM authority by establishing command relationships with subordinates and delegating appropriate authorities to their subordinates. In accordance with Joint Pub O-2, the CINC has six options, including combining options, through which he may exercise his COCOM authority:

- The service component commander.
- The functional component commander.
- The subordinate unified commander.
- The JTF commander.
- A single-service force commander.
- Direct command.

See FM 100-7 for detailed discussions of the above. Also see Figure 2-2..

Under COCOM,CINCs may be given directive authority for CSS. The exercise of this authority includes peacetime measures to ensure effective execution of approved operations plans, effectiveness and economy of operations, and prevention or elimination of unnecessarily duplicated facilities and overlapping functions among the service component commands. For more detail on COCOM, refer to Joint Pub 0-2 and Joint Pub 3-0.

Operational Control

OPCON, which is inherent in COCOM, may be exercised at any echelon at or below the level of the COCOM and is transferable. It is the authority to perform those functions of command involving organizing and employing commands and forces, assigning tasks, and

providing authoritative direction necessary to accomplish assigned missions. However, it does not include authority to direct logistics, administration, discipline, internal organization, or unit training. The CINC uses OPCON to delegate the most authority with which subordinate commanders can direct all aspects of military operations. OPCON is normally exercised through the service component commander. However, in war or MOOTW, a JTF commander with OPCON may control forces of one or more services. Unless another officer is so designated by competent authority, the service component commander is the senior officer of each service assigned to a unified command and qualified for command by regulation of the parent service. Assignment is subject to the CINC's concurrence.

Tactical Control

The CINC exercises or delegates TACON to limit subordinate commanders' authority to direct the use of combat forces. TACON provides sufficient authority for controlling and directing the application of force or tactical use of combat support assets. It does not provide organizational authority or administration and logistics support responsibilities. The commander of the parent organization continues to exercise those responsibilities unless otherwise specified. Specific authorities and limits are defined in establishing directives.

Support

The combatant CINC establishes support relationships between subordinate commanders when one organization should aid, protect, complement, or sustain another. The designation of supporting relationships conveys priorities to commanders and staffs who are planning or executing joint operations. Normally, a directive establishing the support relationship is issued specifying its purpose, the desired effect, and the scope of actions to be taken. Unless otherwise stated in the directive, the supported commander has the authority to direct the supporting effort. The establishing authority must ensure that both the supported and supporting commander understand the degree of authority the supported commander is granted.

The supporting commander is responsible for determining the needs of the supported force and fulfilling support requirements within existing priorities, capabilities, and other tasks assigned. The supported commander must ensure that the supporting commander understands the support required. The defined categories of support are mutual, general, direct, and close.

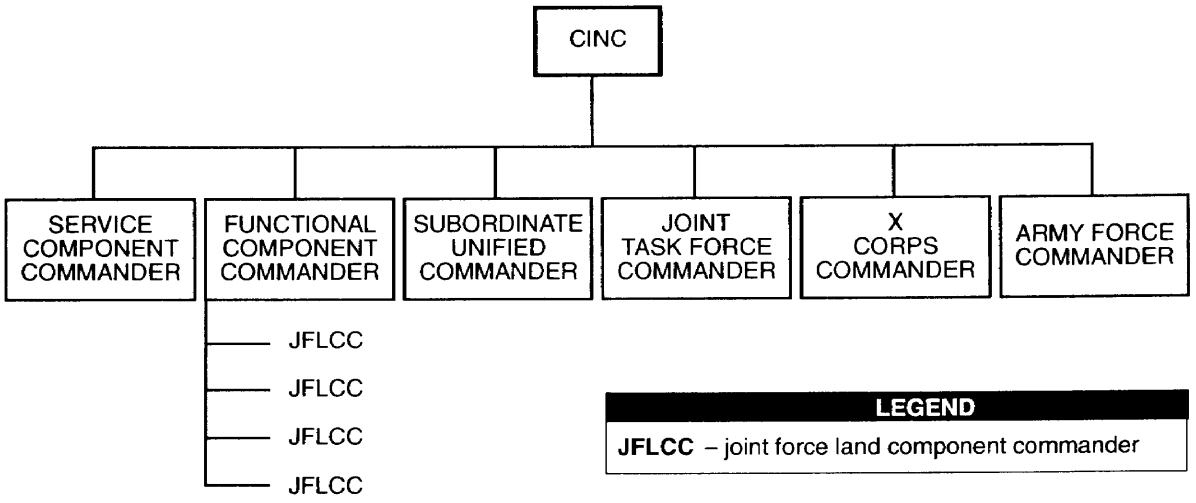


Figure 2-2. Exercising Combatant Command

Mutual Support. Mutual support is action that units render to each other against an enemy because of their assigned tasks, their positions relative to one another and to the enemy, and their inherent capabilities.

General Support. General support is that provided to a supported force as a whole and not to any particular subdivision thereof. It is the most centralized support relationship.

Direct Support. Direct support provides designated support to a specific force and authorizes the supported force to directly seek this support. A supporting force is designated to directly support a supported force on a priority basis. However, the supporting force may provide support to other forces when it does not jeopardize the mission or put the supported force at risk. The authority to accomplish support of other than directly supported forces rests with the higher tactical or operational commander but may also be delegated by doctrine, the operations plan, or the operations order.

Close Support. Close support is action by the supporting force against targets or objectives that are sufficiently near the supported force to require detailed integration or coordination with the fire, movement, or other actions of the supported force.

Other

Other authorities that may be granted outside the command relationships discussed above are ADCON, coordinating authority, and direct liaison authorized (DIRLAUTH).

Administrative Control. All CON is the direction or exercise of authority necessary to fulfill military department statutory responsibilities for administration and support. It may be delegated to and exercised by service commanders at any echelon at or below the service component command.

Coordinating Authority. The CINC may authorize coordinating authority to assist in planning and preparing military operations. Not a command relationship, it is required when coordinating specific functions or activities involving two or more services or two or more forces of the same service. Although its purpose is to foster effective coordination, coordinating authority does not compel agreement.

Direct Liaison Authorized. DIRLAUTH is the authority granted by a commander at any level to a subordinate to directly coordinate an action with a command or agency within or outside the command. DIRLAUTH is a coordination relationship, not an authority through which command is exercised.

TYPES OF COMMAND

Commanded by a JFC with a joint staff, joint force commands are composed of significant elements of two or more services. JFCs have full authority to assign missions, redirect efforts, and direct coordination among subordinate commands. The manner in which they organize their forces directly affects the responsiveness and versatility of joint operations. Unity of effort, centralized planning, and decentralized execution are key considerations. Joint force commands include unified commands, subordinate unified commands, and JTFs.

Unified Commands

A unified command is one with broad and continuous missions under a single commander. Composed of significant assigned components of two or more military departments, it is established and designated by the President through the SECDEF with the advice and assistance of the CJCS. The component services provide forces to operate in the operational areas organized by the theater commander. The SECDEF directs the Secretary of the Army (SofA) to assign Army forces to the CINCs. Having COCOM of US component services, the unified command coordinates their efforts in support of US units. It controls reinforcement operations, expands LOC, and provides support for US forces according to priorities established by alliance headquarters and US NCA policies. CINCs of unified commands serve as the vital link between national military strategy and theater strategy. The unified command—

- Directs intelligence functions.
- Controls custody and release of nuclear weapons in consonance with NCA policy.
- Coordinates special operations (SO) .

- Directs public affairs (PA) activities.
- Controls noncombatant evacuation.
- Coordinates component service allocation.
- Sets priorities for command, control, communications, and computer (C^4) systems and electronic warfare (EW).

Subordinate Unified Commands

With NCA approval, commanders of unified commands may establish subordinate unified commands to conduct continuing operations in accordance with criteria set forth for unified commands. Commanders of subordinate unified commands have functions, authority, and responsibilities similar to those of unified commands, applicable to the AO. Likewise, the service component commanders have responsibilities and missions similar to those of the service component commanders within a unified command. The service component commander will normally communicate directly with the service component commander of the unified command on service-specific matters and inform the commander of the subordinate unified command as that commander directs. Subunified commands and service component commands maintain joint combat readiness of US armed forces under their OPCON. US Forces Korea is an example of a subunified command that enhances the unified commander's span of control. See Joint Pub 0-2, Chapter 3, for further discussion

Specified Commands

Specified commands are COCOMs composed of significant forces from a single service. They have broad and continuing missions. Functionally oriented, they perform a specific worldwide function. Commanders of specified commands have the same responsibilities as commanders of unified commands except that no authority exists to establish subordinate unified commands. No specified commands currently exist.

Joint Task Force

The SECDEF, a combatant commander, a subunified commander, or an existing JTF commander establishes a JTF. It is normally established on a geographical or functional basis to execute missions with specific limited objectives that do not require centralized control of joint logistics. Composed of elements of two or more services, a JTF is disestablished upon completion of its mission. The JTF commander, whose responsibilities are often similar to the theater CINC but lesser in scope, exercises OPCON over forces assigned to the JTF. The unified command's ASCC places an Army force (ARFOR) under OPCON of the JTF commander for the conduct of operations an retains responsibility to provide service-specific support to the ARFOR. The JTF established in the Persian Gulf in 1988 to protect shipping and the JTF established in Panama in 1989 to conduct Operation Just Cause illustrate this type of organization.

Service Component Commands

Service component commands consist of those individuals, units, detachments, organizations, and installations of a single military service that have been assigned to the unified command. The service component commander is the senior officer of the service component assigned to a unified command and qualified for command by the regulations of that service. His assignment is subject to the CINC's concurrence.

The service component commander is responsible for all command aspects of his force, to include CSS within the unified command. A combatant commander and his staff are prohibited by joint doctrine from service component responsibility.

The ASCC serves as the principal advisor to the CINC for supporting and employing ARFORs in theater and forces outside the theater tasked to support theater operations. The ASCC may delegate part of this responsibility as the theater becomes more complex, and it may even become necessary to establish an intermediate headquarters based on the complexity of the operational environment. Additional details of the ASCC are discussed later in this chapter.

Multinational Commands

Command relationships at the operational-level are often unique and varied because of the political factors that influence their development. Existing relationships among multinational forces represent the major differences. The

multinational commander must be aware of these differences and consider them when assigning missions and conducting operations.

A multinational command exercises control over regional commands. The allied or multinational force command translates allied policy--deterrence, defense, and counterattack—into multinational military air and ground plans and objectives for implementation by allied regional commands. The commander influences the campaign by committing reserves, allocating air support, and setting support priorities.

Traditionally, logistics in multinational operations is a national responsibility. However, logistics support must be a collective responsibility of the nations involved. Nations must ensure, either individually or by cooperative agreement, the provision of logistics support for their forces. Commanders of multinational forces must establish requirements and coordinate logistics support within their operational area. The logistics objective in a multinational environment is to achieve the greatest degree of logistical standardization—that is, compatibility and inter operability of equipment, interchangeability of combat supplies, and a commonality of procedures-that is realistically achievable given the constraints of METT-T.

Host Nation Territorial Commands

These allied commands—or equivalent organizations—provide support in their territorial areas of responsibility (AORs). Types of support include HN government agency support, civilian contractors, civilians, military units, and use of HN facilities. HNS may be furnished through military districts and regional and subregional commands. It includes—

Information and intelligence, rear operations, engineer support and maintenance, and operation of selected facilities: ports, main supply routes.

•NBC defense and self-protection.

•MP support.

•Communications.

•Logistics.

•Stationing.

•Population control.

By specific agreements, the HN provides rear operations support within its capabilities. Alliance members provide rear operations support largely with reserve or territorial forces. To incorporate rear operations and support of tactical forces with allied headquarters and HN territorial and allied forces, the senior army headquarters must provide liaison with those headquarters. The ASCC provides liaison parties to obtain allied requirements and priorities, to exchange information and intelligence on current and projected capabilities, and to coordinate allied and HNS activities. In any theater in which the army may have forward- deployed forces, HNS is potentially a significant force multiplier. HNS to US Army forces may include almost every aspect of the support required to sustain military operations. Because of their familiarity with local customs, terrain, transportation networks, facilities, and equipment, HN personnel or organizations can perform many functions as well as, or better than, US personnel or units.

The theater CINC, in coordination with HQDA, must determine functional types and levels of HNS that can be accepted without risking overall mission accomplishment. Use of HNS should not degrade required US unilateral capability. The extent of HNS is limited only by the availability and ability to reach agreements on use of HN resources.

To be effective, HNS must be planned and coordinated well in advance. Understandings and commitments as to its wartime availability must be firm. US commanders must be assured of HNS wartime availability and plan for specific application and use when possible.

THEATER STRUCTURE

A theater is a geographical area outside the continental United States (OCONUS) for which a commander of a unified command has been assigned military responsibility. It may be

viewed from the strategic context as the level of international military cooperation required or the degree of necessary dedicated US military resources. These perspectives may influence how the Army conducts operations in each theater.

Though theaters may involve unilateral US operations, US forces may also act in conjunction with other nations in multinational operations. The prospect of multinational operations should always be prominent as the commander considers his theater structure and command relationships. The Army must be prepared to conduct multinational operations with land, air, and naval forces of other nations. Multinational operations may be in response to a situation where few, if any, formal relationships exist between US forces and those of the other national forces, such as in Operations Desert Shield and Desert Storm.

TYPES OF THEATERS

Theaters may be described as either continental or maritime, based on their dominant geographic and strategic characteristics. This description determines the predominant type of military forces used, the strategic missions assigned, and the strategic and operational objectives pursued in the theater.

Continental theaters primarily involve control of land and associated airspace, European Command (EUCOM), Central Command (CENTCOM), and Southern Command (SOUTHCOM) are examples of continental theaters. Military operations in continental theaters may vary in purpose and scope from participation in the internal defense of another nation against subversion, lawlessness, and insurgency to major operations and campaigns to destroy enemy land forces.

Maritime theaters focus on ensuring control of the seas and associated airspace. Atlantic Command (ACOM) and Pacific Command (PACOM) are examples of maritime theaters. One *or* more of the following types of operations may comprise campaigns in maritime theaters:

- Fleet operations to seize or maintain unobstructed access to ocean areas by destroying or blocking enemy forces.
- Joint operations to control key land areas.
- Limited operations with limited objectives such as peacekeeping or nation assistance.

Continental and maritime theaters are different and demand the synchronized efforts of all services, both within and between theaters. A more detailed discussion can be found in Joint Pub 0-1.

INTERNAL THEATER ORGANIZATION

Theater combatant commanders or subunified commanders organize theaters based on a developed theater strategy. They should always consider joint and multinational operations as they consider the theater structure and command relationships. Whereas unity of command may not always be possible in multinational operations, unity of effort must be accomplished.

Theater Of War

In war, when the NCA authorizes combat operations, the CINC, with NCA and JCS approval, delineates a strategic theater of war, which may encompass part or all of the original peacetime or conflict theater. Part of a theater may be in a state of war, while other areas remain in conflict or peace.

Theater Of Operation

The CINC may subdivide his theater of war into operational-level theaters of operations. The theater of operations may also be subdivided into areas of operation. Usually this is done in response to more than one major threat or because of geography. A theater or area of operations refers to that portion of a theater of war necessary for the conduct of military operations for extended periods of time. It must include adequate area for a subordinate JTF to conduct, support, and administer discrete operations. During World War II, the Atlantic/European/Mediterranean/ Russian theater of strategic direction was divided into four like subordinate theaters of operation, which were geographically coincidental and focused upon different enemy forces.

Communications Zone, Theater Logistics Base, and Combat Zone

The CINC may also organize his theater into a COMMZ, a theater logistics base, and a CZ (see Figure 2-3).

The Communications Zone. The COMMZ extends from the rear or the CZ in the theater of operations to the CONUS base. Its size may vary depending on the size of the theater of operations, number of forces required for operations and sustainment, need for depth, the number and direction of LOC, and the enemy's capability to interdict and disrupt sustainment operations, geography, and political boundaries. The COMMZ contains the LOC; the establishments within the theater logistics bases which provide supply, maintenance, field services, transportation, health services, personnel support, and evacuation; and other agencies required for the immediate support and sustainment of the field forces. The theater support structure can be formed around Army organizations and can be augmented by the Army and other agencies required to support forces in the field. Within the COMMZ, the CINC will normally establish a theater base, which encompasses a theater logistics base.

The Theater Logistics Base. The theater logistics base, located within the COMMZ, will normally be at the junction of the various intratheater and intertheater LOC. It will typically contain logistics facilities required to support the theater such as air and sea ports of debarkation (PODS), marshaling areas, logistics stockage areas, movement control (MC) points, logistics headquarters and units, and the rear portion of the intratheater CZ, together with airfields and air bases, transitioning land forces, theater missile defense forces, the theater rear headquarters and strategic reserves. Provisions must be made for the protection of these bases in crisis and in war.

The Combat Zone. That area required by combat forces to conduct operations, the CZ begins at the forward line of own troops (FLOT), to include the deep battle area, and extends to the corps rear boundary. The CZ

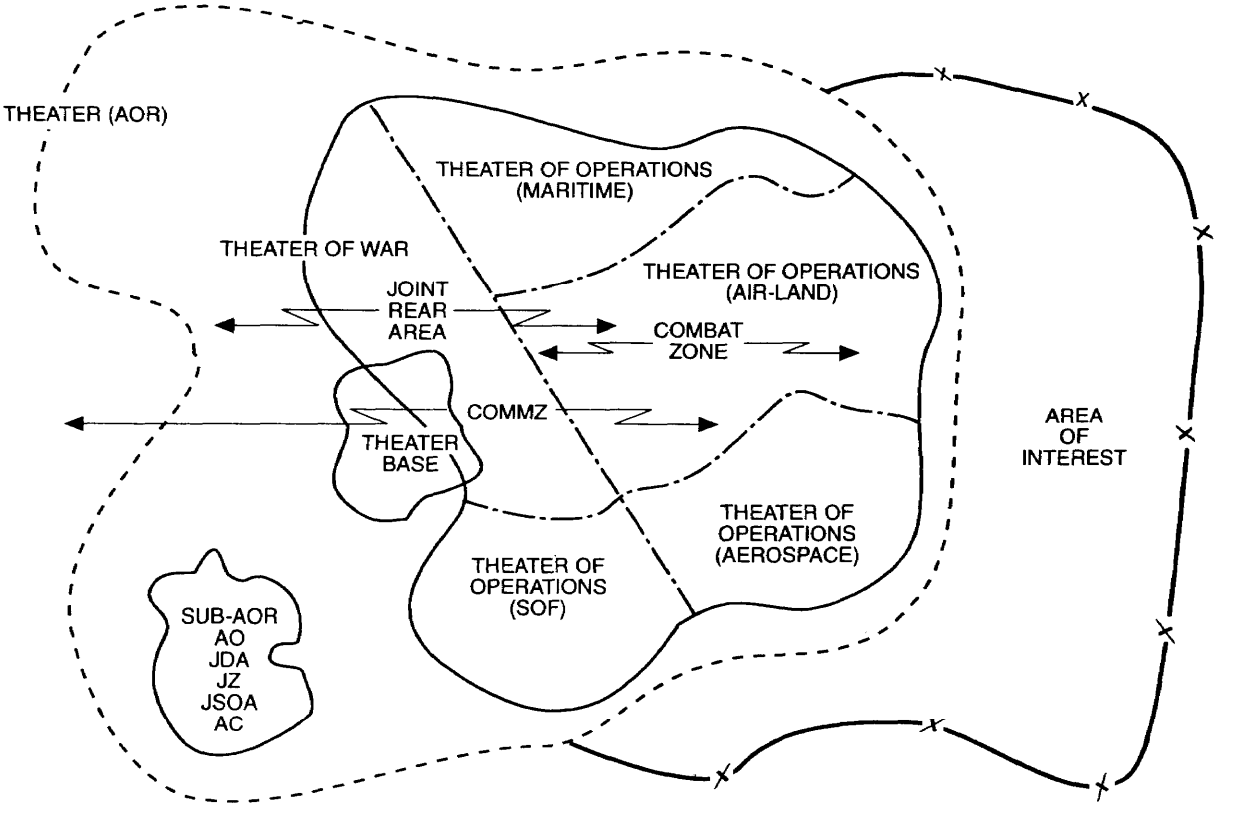


Figure 2-3. Theater Area Organization

may be subdivided into forward and rear CZs which are normally forward of the Army rear boundary.

Joint Areas or Zones

Each CINC may assign associated areas within his theater to subordinate joint force commanders. Joint areas or zones may be designated during MOOTW, while theaters of war and operations are designated only in time of war.

Joint Operations Area (JOA). JOAs are geographic areas created by the CINC in which a specific military mission and supporting activities are conducted. They are usually established for short-term operations. The JTF commander's authority is limited to that required to accomplish specific tasks. Operation Just Cause in 1989 is an example of a JOA.

Joint Special Operations Area (JSOA). JSOAs are restricted areas of land, sea, and air space that the CINC assigns to a joint special operations component for the conduct of short- or long-duration special operations. They may be used for operations in peacetime and conflict. The CINC delineates a JSOA to facilitate simultaneous conventional and special operations in the same general operating area. The capture of the hijacking terrorists of the Achille Lauro in the Mediterranean in 1987 was in a JSOA.

Joint Rear Area. In **war,** as well as in MOOTW, the CINC may designate a JRA. The JRA facilitates protection and operation of installation and forces that provide essential support (CS and CSS) to military operations. Depending on the level of theater development, a JRA may encompass peacetime facilities and be based on peacetime support arrangements. The JRA, which is not necessarily contiguous with the areas actively engaged in combat, may include intermediate support bases and other support facilities intermixed with combat elements.

THE ARMY IN THEATER

The three crucial roles for the conduct of army operations in a joint and multinational environment are joint, multinational, and interagency or United Nations coordination; conduct of operations; and support of operations. Senior army leaders, using an operational-level perspective, task-organize the army to maximize its capabilities in the theater. The army's theater organization provides the means for executing the designs of operational art while facilitating joint operations.

THE ARMY SERVICE COMPONENT COMMANDER

The ASCC, formally known as the theater Army commander, is responsible for-preparing, training, equipping, administering, and providing CSS to Army forces assigned to unified or specified commands. He supports the theater combatant CINC by conducting Army operations to support or attain the objectives of the CINC. In support of the CINC, the ASCC organizes the assigned forces to support the three operational-level roles of the commander:

- Establishing the link between joint, combined, and interagency, nongovernmental organizations (NGOs), private voluntary organizations (PVOs), or United Nations operations.
- Planning and executing operations in support of the joint campaign.
- Executing support operations to sustain subordinate army forces.

The roles may be performed by other subordinate army commanders; however, they remain the responsibility of the ASCC. When directed by a higher command, the ASCC may provide support to other services, especially if the army is the dominant user. The ASCC arranges and coordinates—

- The expansion and operation of the wartime LOC.
- The reception, equipment, preparation, and transportation of US Army augmentation

forces (transferring OPCON to multinational commands as appropriate).

- The provision of operational-level intelligence support.
- Tactical and chemical support to allies.
- Development, acquisition, operation, and maintenance of operational and support facilities.

A more detailed discussion of functions and responsibilities is in FM 100-7.

In joint organizations, ARFOR commanders use the channel from the ASCC to HQDA for service-specific requirements. This channel forms a hierarchy for army support in the theater, but does not necessarily imply a superior/subordinate relationship.

The ASCC is responsible to the unified commander for accomplishing inherent peacetime missions and functions and for planning and preparing for war. The ASCC also communicates directly with HQDA on uniservice matters relating to administration, personnel, training, CSS, communications, doctrine, combat developments, and intelligence matters primarily of army interest. In preparing for and conducting operations, the ASCC coordinates with the Navy component commander, the Air Force component commander, the subordinate commanders within the unified and multinational commands, NGOs/PVOs, and interagencies, where required.

The ASCC commands and controls all US Army forces in the theater. However, this will not always be the case. The JFC in a theater of operations may establish alternate C^2 arrangements. Command arrangements, statutory requirements, and other considerations also affect command relationships. Major examples follow.

- The senior Army air defense organization provides the Army's contribution to air and missile defense in joint and multinational operations. The air defense commander ensures that Army air defense is integrated into the joint and multinational counterair operations and planning. This ensures that theater force projection protection and sustainment requirements are achieved. The area air defense commander exercises OPCON. However, the Army air defense organization is subordinate to the ASCC.
- The military intelligence brigade functions under the command of the US Army Intelligence and Security Command (USAINSCOM) and is OPCON to the ASCC, with the exception of measurement and signatures intelligence (MASINT), signals intelligence (SIGINT), and offensive counterintelligence (CI) operations. MASINT, SIGINT, and offensive CI operations are in general support of the theater.
- Strategic logistics operators in theater—US Army Materiel Command (USAMC) Logistics Support Element (LSE), Defense Logistics Agency (DLA), and Military Traffic Management Command (MTMC)—remain under the command of their parent organizations in peacetime and function under the provisions of a memorandum of understanding (MOU) or memorandum of agreement (MOA) with the unified commander. In wartime, these organizations may be OPCON to the ASCC.
- As war becomes imminent or actually commences, most combat and CS units are placed under OPCON to other tactical commands in theater. However, ASCC retains command, less OPCON, of these units.
- The US Army Corps of Engineers (USACE) districts or divisions in the theater of operations are under the control of the parent organization. In designated countries, DOD has assigned the USACE as the DOD contract construction agency. In wartime, the USACE district or mobilized contingent may be placed OPCON to the ASCC or the CINC.

The ASCC retains control of US Army units arriving from outside the theater until they are equipped and declared operationally ready. Once declared operationally ready, they are released for assignment to parent commands or under OPCON of an appropriate commander.

ARMY SUPPORT STRUCTURE

The ASCC is responsible for providing the necessary capabilities that army forces assigned to a unified command require. The

army support structure is designed to provide the ASCC or unified commander flexibility based on a building-block principle-a phased expansion of capabilities and functions linked to mission requirements. The building-block principle is used to tailor the support structure using modular-designed forces or elements linked to mission requirements. Modularity establishes a means of providing force elements that are interchangeable, expandable, and tailorable to meet the changing needs of army forces. It provides tailored functions and capabilities needed in force projection across the range of military operations. Modularity allows the ASCC to provide only those capabilities that the CINC requires for a given mission.

Building the support structure normally occurs after METT-T analysis, strategic lift, pre-positioned assets, and HNS. Commanders tailor their forces to meet the demands of a specific crisis. A key consideration is to select a support structure appropriate to the mission and then time-phase its deployment and expeditious employment. Balancing combat, CS, CSS, and strategic logistics system support during deployment is equally important when selecting the force because commanders must seek to gain the initiative early, protect the force, and simultaneously prepare for future operations. Crucial to the successful reception, onward movement, sustainment, and protection of projected forces is the correct determination and timely introduction of the support force structure into the theater. Because of the shift to a force projection, crisis-response, regionally oriented strategy, flexibility and the proper tailoring of the force are critical.

Force modules must be assembled and tailored to meet the support requirements of a force based on its operational mission. The support structure will grow from a nucleus of minimum essential support functions and capabilities to meet the requirements of the supported force. As the deployed force grows, the support structure gains required capabilities and expands. The Army support structure must be capable of providing support to the deployed forces; to units in or passing through the COMMZ; and to other units, activities, or forces as directed by the unified CINC. While the tactical commander focuses on his tactical mission, the operational-level commander must focus and concentrate resources on the three roles of joint, multinational, and interagency linkages; support to Army operations; and the conduct of Army operations.

The ASCC has three options for fulfilling his operational-level obligations in an operational area:

- The first is an operational-level C^2 headquarters to perform ASCC duties within the operational area.
- A second is the formation and deployment of an operational-level headquarters, for example, a numbered army, to control the conduct of operations. The ASCC makes this decision in consultation with the CINC. This presupposes a highly complex operational environment with the involvement of multiple ARFORs (usually more than one army corps). The ASCC remains the senior army commander within the unified command and may or may not be physically located within the AC). If the ASCC is not physically located within the AOR and does not deploy, he may constitute and deploy, in addition to the operational-level headquarters that is conducting operations, a requisite headquarters that performs all C^2 for the ASCC's *Title X* support responsibilities within the AOR. The ASCC has ultimate responsibility for the performance of the three operational-level roles. Both of these options require coordination with the CINC.
- The third option is internal to the ASCC and concerns the organization of the army operational-level component. The ASCC may determine a need to consolidate functions under a deputy commanding general (DCG) responsible for operations and a DCG responsible for support and CSS. The DCG for support would serve as the senior logistician responsible for battle command of all CSS and support forces, for coordinating all logistics in support of ARFORs, and, if designated the Executive Agent, coordinating logistics support for joint and/or multinational forces in the theater of operations. The DCG for

operations would serve as the senior operator responsible for battle command of all maneuver forces, conducting major operations, battles, and engagements. In this arrangement, the ASCC continues his service responsibilities and establishes required linkages among joint, multinational, interagency, NGO, PVO, or United Nations as required. This option reduces the span of control required of the commander. As with the first option, complexity of the environment determines the selection of this organizational alternative.

Both the ASCC and numbered army commanders would be responsible for establishing linkages with the joint, multinational, government, nongovernment, private voluntary, and interagency organizations. However, the ASCC would focus on support operations and the numbered army commander would focus on the conduct of operations and the requirements of a joint force land component, if designated by the CINC. These options provide an orderly means for the army to accomplish the operational-level responsibilities in theater. They also provide a means for the army theater structure to evolve as the complexity of the theater evolves.

Another set of circumstances in which the army could be divided into separate elements is when the CINC requires an ARFOR's urgent and direct responsiveness to him. Under such exceptional circumstances, the theater organization may have two or more independent ARFORs operating directly under the theater CINC. These separate ARFORs would focus on specific missions, as determined by the CINC and the ASCC. The ASCC would continue to focus on supporting the operations of all army forces within the theater. However, commanders of the ARFOR under COCOM (working directly for the CINC) would focus primarily on operations and the establishment and maintenance of joint and multinational linkages. Thus, the operational-level commander's three roles would be conducted by both Army commanders.

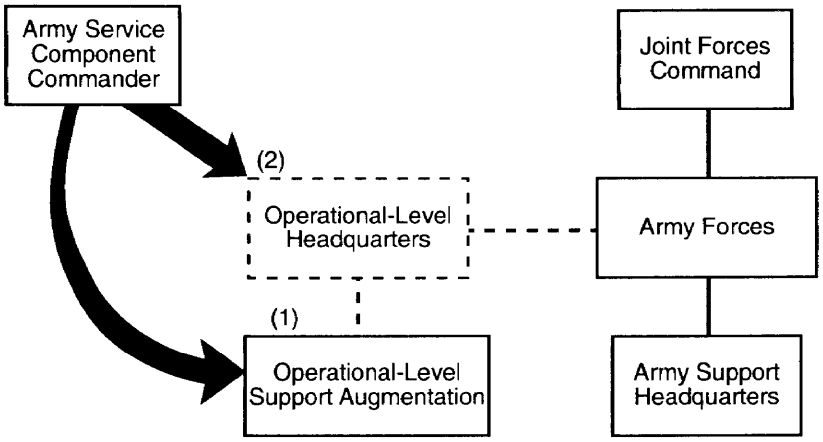
The ASCC structure is adaptable enough to meet the three crucial roles in any theater situation. The ASCC's responsibility is to advise the CINC of a structure that meets the dictates of operational design.

The corps and below normally operate at the tactical level; however, these tactical organizations are fully engaged with their tactical mission. They require augmentation by operational-level CSS organizations to provide logistics capability to the force. When fully engaged at the tactical level, these organizations have neither the personnel nor the equipment to effectively perform both their tactical mission and the added operational-level support functions and command responsibilities. Therefore, when support requirements exceed their capabilities, tactical-level support organizations may be augmented by other support organizations. These augmented support organizations may serve as an operational-level (intermediate) support headquarters and form the nucleus of an operational-level support command when deployed, The support organization may be placed OPCON to the tactical organization or under an operational-level support organization if deployed.

The tactical-level support organization may be further augmented by elements in the strategic logistics system LSE when the tactical organization operates as the highest army component in a joint force. In this capacity, the tactical commander would be the army interface with the JTF for all operational and support matters. Ideally, when operations are conducted at the operational level, they are performed by an echelon not directly responsible for tactical operations.

When a separate support headquarters is required, the operational-level C^2 headquarters will form the nucleus of a senior logistics command. Initially, this headquarters may be attached to the senior Army command in the AO. Expansion of support organization is shown at Figure 2-4.

In multinational operations, the theater may require a large support structure to provide support throughout the AU. Therefore, the operational-level support base may range from no elements to a very large number of elements. This ultimate base of logistics support for the theater is provided through the LSE, which projects to the theater the full



LEGEND

(1) The operational-level support augmentation provides direct support to tactical units.

(2) The tactical-level headquarters determines that the complexity of the operation and support requires a separate support headquarters. If activated, the operational-level headquarters performs all operational-level command responsibilities.

Figure 2-4. Expansion of Support Organization

capability of CONUS with its national inventory control points (NICPs), depots, arsenals, plants, and the industrial base. The entire CSS system, from the FLOT to CONUS, is designed to provide the combat forces with what is needed, when it is needed, and where it is needed.

PART TWO

Army Operational-Level Combat Service Support

The requirement to deploy anywhere in the world with a force that may range from a small specialized element to a corps or larger force is a complex process. The CSS challenge of providing the right support with the properly sized force at the right time and place is equally as complex. Planners and commanders must decide the proper support requirements to meet the CSS needs of the deploying force. The LSE, HNS, and the use of deployed civilians and contractors are important factors in this equation.

Operational CSS is the linkage between the strategic and the tactical levels and the product is sustainment. This linkage overlaps both levels, resulting in a seamless system that virtually eliminates distinct boundaries. Therefore, both the supported and the supporting operational-level commanders manage some strategic and tactical CSS functions in support of the CINC's missions. Operational logisticians place requirements and strategic logisticians fill them according to the CINCs strategic CSS priorities.

Army CSS functions are to be performed in as routine a manner as possible throughout the range of military operations. Included are the design and development, acquisition, storage, movement, distribution, maintenance, evacuation, and reconstitution of materiel; the acquisition or construction, maintenance, operation, and disposition of facilities; the acquisition, preparation, maintenance, equipment, movement, evacuation, and hospitalization of personnel; the acquisition or furnishing of services; and the acquisition of food services and field feeding. Logistics also involves the integration of the strategic, operational, and tactical sustainment efforts within the theater and planning and effecting the development, mobilization, deployment, demobilization, and sustainment of national and/or multinational military resources to support National Security Strategy and National Military Strategy.

Chapter 3

Responsibilities, Planning, and Support

On the modern battlefield, operations and CSS are more interdependent than ever before. Modern and future weapons systems with their increased sophistication, mobility, and firepower require not only highly skilled and motivated soldiers to operate and maintain them, but a highly flexible and responsive integrated military and civilian logistical support system. CSS provides the tactical commander staying power by providing the required people, materiel, health services support (HSS), facilities, transportation, and services. The mission of the Army logistics system is to support soldiers and their systems with what is needed, when it is needed, and where it is needed. The system's effectiveness is measured by how it enhances and supports the CINC's strategic, operational, and tactical plans. Operational-level CSS focuses primarily on the sustainment of the force, while tactical-level CSS focuses primarily on the readiness of the force.

RESPONSIBILITIES

Arranging for and providing CSS are national responsibilities. Unless otherwise directed by the NCA or the CINC during war, the implementation and execution of CSS functions remain the responsibility of the services and the service component commander. Normally, each service is responsible for the support of its own forces except when that support is provided for by agreements with other services, national agencies, or allies. However, when deployed for major operations, the services may become interdependent. CINCs may designate a service, usually the dominant user, to provide common CSS functions for the entire theater. During Operation Desert Shield, when common-item support responsibilities exceeded the providing service's capabilities, the CINC directed that it be totally or partially provided by another service or by contracting for, or obtaining, HNS. Host nations provided assistance in Class I (Subsistence) and Class III (POL).

Operational-level commanders must determine the proper balance between centralized planning and decentralized execution of CSS functions and responsibilities. Too much centralization often results in rigidity and sluggish response, while too little causes waste and inefficient use of critical resources. Centralizing functions to avoid unnecessary duplication is not always justified. Limited duplication can be beneficial and it may be necessary for adequate flexibility and mobility.

The operational-level commander must decide which elements of a force to deploy first. He must ensure the proper mix of combat, CS, and CSS forces based on the assigned mission and other METT-T considerations. Generally, initial deployments are in the form of self-sustained and balanced task forces appropriately tailored to accomplish assigned missions. As the theater matures, other forces are deployed to provide required support capabilities. Deploying forces must be sequenced to arrive in the area of operations in order to support the CINC's concept and support forces during all phases of operations. The ASCC's staff helps leaders focus on the mission by providing broad policy direction and by coordinating functions both internally within the component and externally with joint, multinational, interagency, and HN agencies.

PLANNING

CSS is vital to the successful execution of an operations plan. Planning involves critical decisions concerning the interface of combat, CS, and CSS at all levels. CSS planning and operations must be versatile; they must complement combat plans and operations, thus enhancing the ability of the supported unit to accomplish its mission. Commanders must anticipate their units' mission requirements and provide the required support. They must assess what resources and capabilities are available in the theater and tailor follow-on forces accordingly. Deploying units should be self-sustaining in the theater of operations until LOC are established.

> *Logistics comprises the means and arrangements which work out the plans of strategy and tactics. Strategy decides where to act; logistics brings the troops to the point.*
>
> **Jomini**

The CINC's logistics support plan is normally based on a campaign plan. As the CINCs of the unified commands develop their strategic concept of operation, they concurrently develop, in coordination with their ASCC, a concept of support. They and their staffs consider a myriad of support factors that affect the ability of forces to conduct operations. At the campaign and major operation planning level, support can be a dominant factor in determining the nature and tempo of operations. Sound support planning, anticipation, and analysis are three factors that allow for rapid changes to operations plans.

CSS planning should be centralized, comprehensive, tailorable, flexible, and continuous. Its purpose is to identify the mobility, sustainability, and infrastructure necessary for strategic, operational, and tactical operations. Planners also consider the use of army war reserve (AWR) stock in the theater, at port of embarkation (POE), or afloat,

thereby reducing requirements in theater and providing earlier force closure for stabilization operations. If appropriate, planners must also consider HNS. CSS planning will—

- •Identify significant time-phased materiel requirements, facilities, and other resources necessary to support the OPLAN.
- • Identify the capabilities, vulnerabilities and limitations of the aerial ports of debarkation (APODs), aerial ports of embarkation (AF'OEs), sea ports of debarkation (SPODs), sea ports of embarkation (SPOEs), and their reception and clearance capabilities.
- •Identify support methods and procedures required to meet the needs of air, sea, and land LOC.
- •Identify vulnerabilities of certain types of systems and forces and to weapons of mass destruction.
- •Provide for coordinating and controlling onward movement of arriving forces and materiel.
- •Plan on reasonably assured HN and third nation resources.
- •Identify sustainment capabilities by– measuring US ability to fill material requirements.

PEACETIME PLANNING

Using planning guidelines and established doctrine, logisticians will determine the quantities of supplies and services needed to support a major regional contingency (MRC) or a lesser regional contingency (LRC). Before strategic deployment begins, planners must identify LOG capable of accommodating the types of aircraft and ships that will be used. Some commodities, for example POL and ammunition, require special facilities and cannot be off-loaded everywhere without significant disruption of port activities. Peacetime planning should consider AWR stock, HNS agreements, containerization, and weapons of mass destruction.

Army War Reserve Stock

AWR stock is materiel amassed in peacetime to meet the increase in military requirements at the outbreak of war. AWR stock remains set at the minimum level needed to sustain and equip the approved forces as outlined in the defense planning guidance. AWR consists of—

- •AWR sustainment (AWRS) stock. AWRS stock is acquired in peacetime to meet increased wartime requirements. It is intended to provide support essential to combat operations and postmobilization training beyond the capabilities of the peacetime stocks, industry, and FIN.
- •AWR operational project (AWROP) stock. AWROP stock is materiel above normal TOE, TDA, and common table of allowance (CTA) authorizations tailored to key strategic capabilities essential to the army's ability to execute its power projection strategy. Examples of these projects are inland petroleum distribution system, Force Provider, aircraft matting, aerial delivery, and CONUS replacement centers (CRC). They are positioned in CONUS with tailored portions or packages pre-positioned overseas.
- •AWR pre-positioned sets (AWRPS). AWRPS are AWR pre-positioned materiel—end items, supplies, and secondary items—stored in unit sets to reduce force deployment response time and designed to support multiple contingencies.

HNS Agreements

Potential HNS agreements should address labor support arrangements for port and terminal operations, use of available transportation assets in country, use of bulk petroleum distribution and storage facilities, possible supply of some Class III (Bulk) and Class IV, and development and use of other field services. Agreements with allies should be initiated, continually evaluated for improvement, or specifically spelled out to enable CSS planners to adjust for specified requirements.

Containerization

Containerization significantly improves the delivery times of resupply and other selected cargo to the theater of operation by reducing handling, shipload, and discharge time. However, effective use of the system requires advance planning to ensure that

necessary material handling equipment (MHE) and container handling equipment (CHE) are available. Planners must consider the use of existing technologies to enhance visibility of location and content of containers.

Pre-positioning of stocks provides the capability to rapidly resupply forces until sea lines of communication (SLOC) can be established. Locating pre-positioned stocks in potential theaters of operations is desirable. Alternatives are pre-positioned stocks afloat or in intermediate support bases and/or AWR stocks assembled in tailored packages for deployment with projected forces. In areas of potential operations where port facilities are limited and requirements for SLOC exist, pre-positioning of port construction equipment and materiel is highly desirable.

Weapons of Mass Destruction

The use of weapons of mass destruction can have an enormous impact on the planning and conduct of CSS operations. Not only do the sheer killing and destructive power of these weapons create a battlefield effect, but the strategic, operational, psychological, and political impacts of their use affect logistical plans and operations. Further, the proliferation of weapons of mass destruction dramatically alters the nature of regional conflict. As these weapons proliferate, the likelihood of their being used against friendly forces or in response to an enemy's first use increases. The effects of these weapons on an operation—either through use or the threat of use-can cause large-scale shifts in logistical objectives, APODs/SPODs, and equipment storage sites/site selection. Thus, planning for the possibility of their use against friendly forces is critical to campaign design. See FM 3-4-1 for guidance on fixed-site protection in NBC environments.

Planners must consider the implementation of defensive NBC principles of avoidance, protection, and decontamination when planning CSS operations. See FM 3-100 for discussion of NBC principles. They must plan for effective air and ballistic missile defense with different systems for all CSS bases. Planners must assess an enemy's willingness to employ these weapons and the conditions that would prompt him to do so. However, commanders should never assume that the enemy is rational. A virtually defeated enemy may resort to unrestricted warfare by any means at hand.

PLANNING FOR JOINT AND MULTINATIONAL LOGISTICS

Many Army CSS units will likely have joint and possibly multinational logistics responsibilities. Command, control, and composition of operational-level CSS units are tailored for the situation. Commanders and planners at the operational level must take maximum advantage of available HN infrastructure and contracted logistics support.

CSS planners must identify joint, multinational, or coalition logistics requirements and support that may have to be given to the host or coalition nations as quickly as possible so that scarce resources can be distributed throughout the force. The Army must be prepared to go beyond the accepted principle that logistics is a national responsibility. It must endeavor to streamline multinational efforts toward focused combat power. Complementary arrangements work best when each partner contributes national assets as they are able. The coalition or alliance coordinates these efforts. The supported CINC can establish an executive agency for specific classes of supply to meet the demands of joint and combined operations. The CSS structure, and service component logistics C^2 headquarters are essential for operational and tactical planning and execution.

Theater logistics planners must consider a theater distribution plan (Appendix C) as soon as possible. This plan shows the flow of sustainment support in the theater. The development of the distribution plan is guided by the commander's concept of operations, the number, types, and location of in-place and incoming units to be supported, and their time-phased arrival in theater. Establishing priorities is essential. Clearly articulated priorities provide guidance at all levels and aid in ensuring that critical transportation is provided for the highest priority requirements. Planners must include Army operational- and strategic-level logistics units in early deployment flow either to provide CSS support not available to the tactical level or to support joint or multinational operations. This enables

the tactical commander to focus on his tactical mission.

PLANNING FOR CIVILIAN PERSONNEL

Civilian personnel have deployed in support of the military throughout history, but never to the degree that is occurring today. Civilian personnel provide essential CSS support for military operations in peacetime as well as in conflict or war.

> *As we have seen throughout* our *history and has been dramatically underscored by Desert Shield, our civilians fulfill a vital role in our trained ready Army*
>
> **General Carl Vuono, Army Chief of Staff**
> November 1990

Identifying requirements to be filled by civilian personnel—government or nongovernment agency civilians and contractors—and identifying qualified personnel to fill those requirements are essential when planning for operations. Appropriate proponents must ensure that civilians are incorporated into the deliberate planning so that they are trained and ready in a timely manner. As part of his campaign plan, the CINC must plan for civilians on the battlefield and establish guidelines for how far forward civilians will be on the battlefield as conditions go from peacetime to conflict or war. Three reasons for employing civilians are that they—

- Augment military capabilities, thus freeing soldiers for other duties or duty forward.
- May be employed without a mobilization, while much of the military's CSS is in the reserve components.
- Have technical skills that are not available in the military.

Civilian personnel, who provide essential CS and CSS roles in a theater, are a key component of the Total Army. For example, civilian members of the LSE provide national-level supply, maintenance, and technical assistance; contractors under the Logistics Civilian Augmentation Program (LOGCAP) provide a wide range of field services, such as laundry and showers; and the Army/Air Force Exchange Service (AAFES) deploys civilians to run an exchange system for everyday necessities. This civilian workforce includes CONUS expansion and OCONUS requirements in support of military operations. Planners must consider designation of key civilian jobs as *emergency essential* to ensure critical skills are available in a crisis. Sources that can assist in providing combat support and CSS roles in a theater of operations, include-

- Department of State.
- Department of Defense (DOD).
- International nongovernment agencies (INGOs), that is, United Nations agencies and the International Red Cross.
- Private volunteer organizations,
- The Logistics Civil Augmentation Program.
- Vendors and contractors, including those of host and third nations.

Support

Military operations conducted within the three levels of war include the unified operations of the CINCs theater campaign plan, joint operations of subordinates' campaign plans, the senior Army commanders' major operations, and battles composed of a series of engagements between opposing forces conducted at the corps level and below. In order to accomplish the mission, sustainment through the three levels of logistics applies to crisis situations across the range of military operations. The logistician must have a clear view of this continuum as he plans, builds, tailors, and modifies the organizations that will carry the force to the conclusion of the ***crisis*** through redeployment.

THE LEVELS OF SUPPORT

When tailoring a support force for a particular plan or crisis response, logisticians must consider that regardless of the size of the supported force, support will move through the

logistics system to produce the sustainment needed. The three levels of logistical support—strategic, operational, and tactical—correlate to the three levels of war (see Figure 3-1).

Strategic Logistics

The strategic logistics system supports the attainment of broad goals and objectives established by the NCA in national security policies. The strategic—national and theater—level encompasses those political, economic, informational, and military measures that contribute to the strategic theater campaign plan and includes all actions involved in providing logistical support to a theater in the various operational areas. Among those actions are-

- •Industrial base mobilization.
- •Installation base support.
- •Consumer logistics.
- •Acquisition, preparation, maintenance, equipment, movement, medical treatment, evacuation, and hospitalization of personnel.
- •Intratheater strategic concentration.
- •Stockpiling.
- •Acquisition or construction of' facilities.
- •Acquisition of services.
- •Host nation support.

The strategic logistics system includes special activities under DA control and the NICPs; national maintenance points (NMPs); depots, arsenals, data banks, plants, and factories associated with USAMC activities.

The strategic agencies—General Services Administration (GSA), DLA, Defense Mapping Agency (DMA), US Transportation Command (USTRANSCOM), and USAMC-receive and fill all requisitions from both forward-presence and CONUS-based deploying forces. Forward-

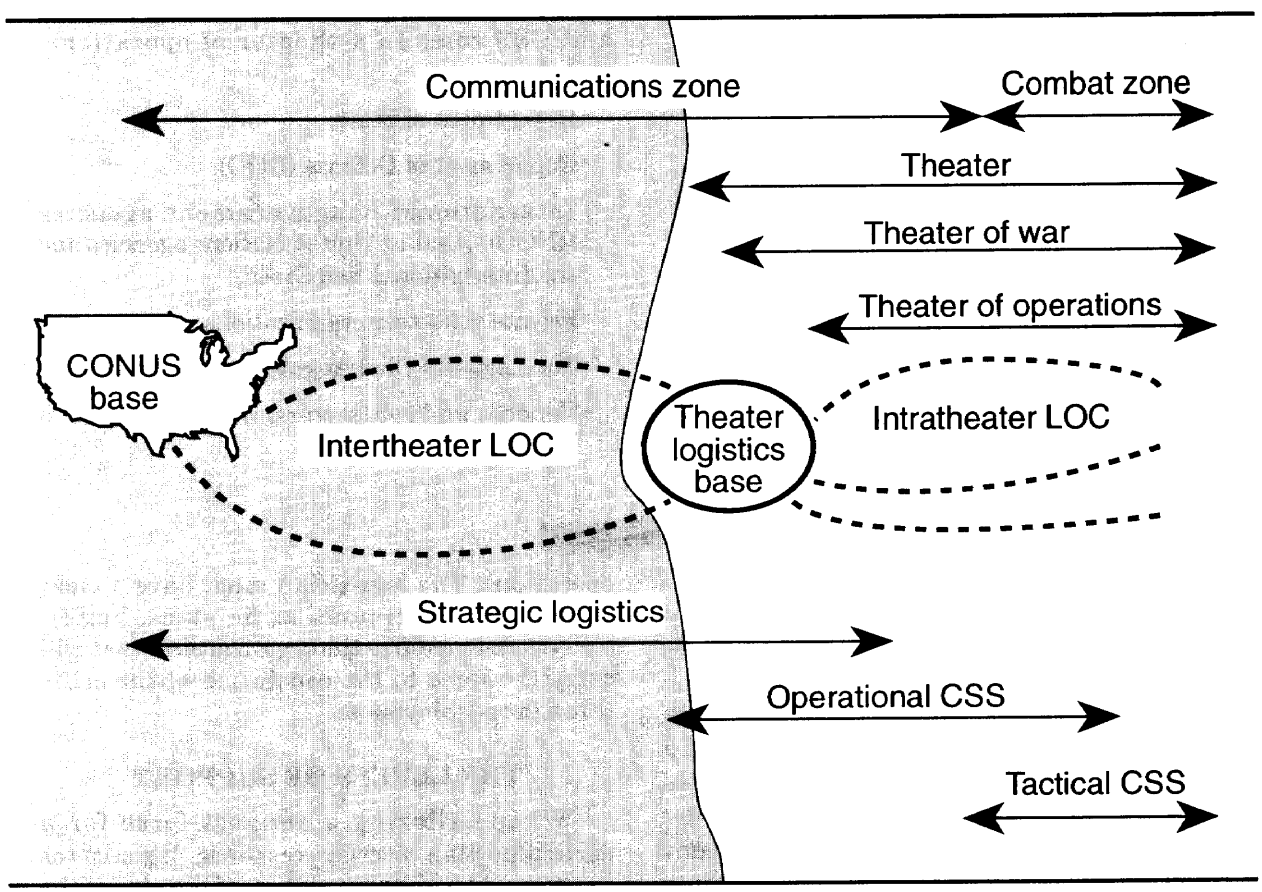


Figure 3-1. The National Theater Logistics System

presence and force projection forces' requisitions receive priority. GSA, DLA, DMA, USAMC, and US TRANSCOM review anticipated supply requirements and initiate action—increase production lines, obtain additional vendors, begin industrial base expansion and expansion of maintenance programs—to prevent forecasted shortages. See Appendix A for discussion of the national industrial base. Strategic functions are performed in CONUS, the theater base, in the JRA of the COMMZ, or are coordinated through the LSE in the COMMZ.

The strategic/operational bond of logistics in a forward-presence, force-projection strategy is at the theater level. Through the use of the LSE, this bond is seamless, with military contractors and deployed civilian employees providing support within, as well as outside, the theater of war and theater of operations. Strategically, centralized management and distribution of personnel and materiel and decentralized execution at the operational and tactical levels optimize the logistics flow.

USAMC strategic organization actions are coordinated through the LSE deployed in theater. The LSE provides limited strategic-level or other directed logistics support in the theater of operations on an interim basis. The LSE is the forward element of the national logistics base. When deployed into a theater of operations, the LSE provides limited, depot-level logistics support on an interim basis. Early deployment of the LSE will ensure a positive link from the deploying units to the national support system and may be required to fill gaps in the logistics force infrastructure or projected selected elements of the national/industrial base in the theater. The size of the LSE is determined by the missions assigned to it. The initial deployment will be for logistics assistance along with the other logistics personnel assigned to major units. The LSE does not replace capabilities provided by TOE organizations in the force structure.

Operational-Level CSS

Operational-level CSS supports the CINC's plan in either a mature or immature theater. The theater of war base and the theater of operations forward operating bases provide strategic and operational CSS to the tactical CSS bases. Operational CSS links strategic logistics to tactical CSS on the battlefield, ensuring success at the tactical level.

Operational and tactical CSS differ by the longer planning and preparation time required to support extended operations. Operational support attempts to balance current consumption with the needs of subsequent major operations. Operational logisticians focus on establishing and maintaining LOC and sustaining the force in the theater of operations consistent with the CINC's strategic logistics priorities. They also focus on reception of forces and the onward movement of units and personnel; planning, coordinating, managing, and directing the positioning of supply, maintenance, and field service activities; managing theater reserves; creating transportation networks and providing movement assets; and providing HSS and other support required to permit units to accomplish their mission.

At the operational level, the distinction between operations and support begins to erode. Synonymous with operations at this level of planning, support becomes a significant undertaking of the ASCC and his staff. Army commanders at the operational level must be prepared to operate in unified, joint, or multinational, and, frequently, interagency operations, for example, support of counterdrug operations.

The CINC, based on METT-T, develops an organization capable of executing CSS tasks and then directs the integration of CSS to most effectively support the campaign plan. ARFORs, previously referred to as echelons above corps (EAC), conduct operational-level responsibilities; however, tactical (corps and below) units may be required to fill this role when they are operating at the operational level of war. When this occurs, the tactical ARFORs must be augmented when they are assigned operational-level missions. Information systems enhance the process and provide in-transit and total asset visibility, allowing commanders to know the location of resources. Commanders at the operational level must establish and/or coordinate support

functions to allow tactical commanders to focus their attention on tactical-level operations rather than operational-level support activities.

Tactical CSS

Tactical CSS includes activities necessary to support military operations and activities that precede and follow them. The tactical logistician focuses on acquiring and providing to the using unit support required to win the tactical battles in the CZ. He continually assesses inbound operational support as well as any joint, multinational, HNS, or coalition support provided. At this level, the essential functions of supply, maintenance, transportation, technical assistance, personnel service support (PSS), and health and field services are delivered to soldiers to permit them to accomplish their particular mission. Tactical improvisation as a sustainment imperative solves the problem only if anticipated at the strategic and operational levels.

The three levels of logistics must blend together, creating a seamless system of support. The continuation of a seamless system makes the debarkation line between the levels less visible as organizations and functions interweave within each one. Figure 3-2 depicts this system.

SUPPORT OPERATIONS

Successful logistics must be both effective and efficient. Five characteristics—anticipation, integration, continuity responsiveness, and improvisation—facilitate effective, efficient CSS operations. Commanders and logisticians who integrate logistics concepts and operations with strategic, operational, and tactical plans must anticipate requirements. CSS operations and systems must be responsive to the commander, providing continuous support to forward-deployed forces. Finally, logisticians must improvise to expedite needed actions. These characteristics, introduced in FM 100-5, are amplified in FM 100-10.

In order to accomplish successful logistical support operations, the logistician must

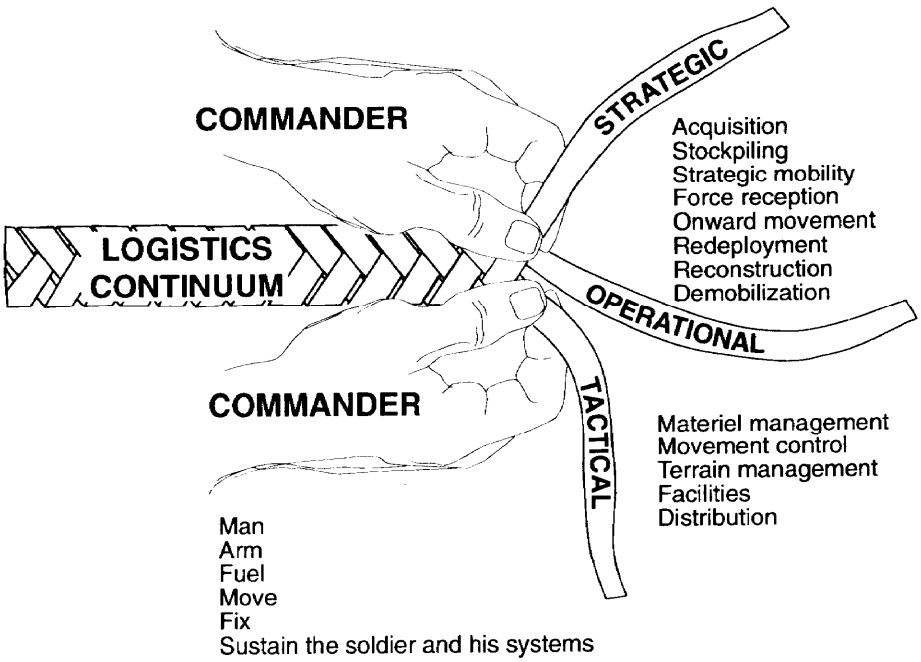


Figure 3-2. Melding of Strategic, Operational, and Tactical Logistics

continually plan for the transition from peacetime to war. Normally, CSS organizations that function in a peacetime environment are ready to quickly, smoothly, and efficiently transition to war. Without anticipatory and effective transition planning and execution, a theater cannot be sustained during war.

Sustainment is providing and maintaining the force and equipment required to accomplish national objectives. Establishing a sustainment base requires determining what is required to enable a force to achieve those objectives in a specified period of time. Generally, the logistician uses the theater CINC's estimate of the time required for the operation to form a stockage objective. He then calculates the total logistics support required based on time, environment, type of force, and the number of troops in theater.

The initial, austere stages of contingency operations will influence the size and composition of CSS capabilities and organizations deployed. The composition of strategic lift dictates that only essential CSS capabilities be deployed early based on requirements determined during logistics preparation of the theater (LPT). The focus of early deploying CSS elements is port opening, theater reception, and theater onward movement. Even as lift catches up with demand, planners must be careful to limit the size of the entire force to that required to conduct operations. To contend with this reality, logisticians will conduct split-based operations using forward-deployed capability-based teams. Recent experience and technological advances in communications and automation have shown that some military functions do not have to be done entirely in theater. These operations are characterized by doing in the theater only selected critical tasks of the function. Split-based operations depend upon communications between the deployed module and the stay-behind elements.

The potential for the application of split-based operations to CSS functions is unlimited. Materiel management is an example. Only those personnel and equipment required to make critical management decisions on the spot need to be deployed. The remainder of the MMC can accomplish its tasks from another location so long as communications between the two elements are assured. TAV and in-transit visibility (ITV) of supplies are also required.

Support for Power Projection Operations

CSS for power projection operations is guided by the following:

- Making maximum use of all available local, HN, and regional resources; limiting supplies to essentials.
- Concentrating maintenance efforts on returning major items of equipment to service.
- Structuring follow-on forces to ensure operational CSS capability.
- Relying initially on strategic airlift for rapid resupply.
- Surface-transporting outsized equipment, armored units, and bulk supplies when possible.
- Remembering that availability of CSS capability is as important in the initial stages of deployment as in later stages.
- Fixing as far forward as capability and time permit.
- Ensuring maximum coordination with other services and DLA to minimize duplication.
- Quickly establishing priorities for materiel that will be moved via air lines of communication (ALOC).

All Army installations play a unique role by serving as power projection platforms for a largely CONUS-based army. Some launch and recover the operating force while others launch and recover the supporting and sustaining materiel, individual replacements, communications, or technology that permit the operating units to successfully carry out force projection missions. Installations must be organized to support their power projection responsibilities through training, deployment, and follow-on support. As installation missions evolve, some new programs are emerging that are designed to enhance the quality of life and improve customer services. These programs are resource multipliers and will continue to be

implemented as resources decrease and the total force is downsized. See FM 100-22 for further information.

HNS is theater- and situation-dependent. Available support depends on the geographical area, prior agreements, the friendliness of nations in the area, and the nations' willingness and ability to provide it. In some potential theaters of operation, agreements may exist between the US and the HN; in others, no nation maybe friendly to the United States, in which case no HNS will be available-at least, not initially.

Support for Force Projection Operations

The uncertainty of where the army may conduct force projection operations makes planning more difficult than that for an established theater. However, CSS must be adequate and responsive to support the deployed force. Planning efforts must concentrate on determining required capabilities and functions and deploying forces to perform those functions. Initially, support may be austere. Theater airlift and maximum use of other air transport techniques for resupply must be planned. FM 1-100 and FM 55-10 provide detailed discussions of army logistics air transport operations.

Army pre-positioned afloat (APA), designated Army War Reserve-3 (AWR-3) APA, provides the combatant CINC with deployment flexibility and increased capability to respond rapidly to a crisis or contingency with a credible force. APA provides a forward deployed source of equipment, materiel, and sustainment aboard APA ships to support contingency operations. The APA ships are configured to equip combat, CS, and CSS units with unit-configured sets and sustainment stocks. The ships are loaded with critical weapons, equipment, and supplies common to all theaters. APA operations, which contribute mobility and flexibility to the force projection strategy, are discussed in detail in FM 100-17-1.

LOTS operations—the loading and unloading of ships without the benefit of fixed port facilities—may play a key role in initial and resupply operations, particularly for outsized cargo. FM 55-50 and FM 55-60 provide detailed discussions of LOTS and water terminal operations. A requirement may also exist for the development of expedient facilities to handle roll-on/roll-off (RO/RO), break-bulk (BB), and container ships. Joint Pub 4-01.7; FM 55-10, and FM 55-60 provide detailed information on container operations, movement, and handling in the theater of operations.

Support for a Joint Task Force

CSS provided to the deployed force and other elements of a JTF will initially be austere. CSS functions that cannot be initially performed in the theater of operations will be accomplished in an intermediate support base (ISB), afloat, in a lodgment area, or at CONUS installations. Operational CSS organizational structures will be established when the span of control or size of the augmentation force exceeds the capability of the deployed force's CSS capability. The functional elements of operational CSS elements must deploy during the initial stages of deployment to provide interface with strategic levels. As the theater matures, capability exists under the building-block concept to expand the CSS base.

A military force is only as combat-capable as the effectiveness of the CSS it receives. Unless otherwise directed or when CSS is otherwise provided for by agreements with other services, national agencies, or allies, each service is responsible for the CSS of its own forces. However, when deployed for major operations, the services may become interdependent. The CINC may designate a service, usually the dominant user, to provide common logistics functions for the entire theater. The army component of a joint force will normally be required to provide logistics support to other service components, and it may be tasked to provide specified support to allied commands or to the HN, This may be necessary to ensure effective execution of approved operations plans (OPLANS); effectiveness and economy of operations; and prevention and duplication of facilities and overlapping functions among services.

The army, for example, may have the responsibility of providing Class I (Subsistence), Class III (POL), Class V

(Ammunition), and Class VIII (Medical). During Operation Desert Shield, when common-item support responsibilities exceeded the providing services' capabilities, the CINC directed the support be provided totally or partially by another service, by contracting, or by obtaining HNS. HNS helped the army by providing assistance in Class I and Class III.

Support to Army Special Operations Forces (ARSOF)

The Army special operations theater support element (ASOTSE) plans and coordinates logistics support and sustainment for ARSOF and, when directed, other services and allied SOF. The SOTSE has no organic support infrastructure; however, under some circumstances, CS and CSS elements may be assigned or attached to the SOTSE to support and sustain theater ARSOF. See Chapter 5, FM 100-25,'for more information on the SOTSE.

ARSOF Logistics Options. An integral part of the Army service component command, ARSOF depend on the theater logistics system to sustain their operations. In logistically immature theaters, ARSOF units may depend on other services. In developed theaters, the senior logistics headquarters sustains them from the theater sustainment base. ARSOF typically operate from austere bases in undeveloped theaters and on the flanks of developed theaters where no sustainment base exists. They must be prepared to provide their own support for short periods until a support base is established. ARSOF logistical capabilities vary from one organization to another. Each type of ARSOF unit depends on the theater logistics system for a different mix of direct support (DS), general support (GS), and, in some cases, even unit-level support. ARSOF planners must apply their logistics knowledge during the planning process to meet specific ARSOF needs. Logistics planners should consider support from other services, as ARSOF rarely operates in other than a joint environment. The theater logistics system makes materiel and services available at the logistics unit's operating base. The SOTSE commander should arrange habitual support relationships between the ARSOF and the Army logistics elements providing its support on an area or unit basis.

Special Operations Support Battalion (Airborne). Logistics support to ARSOF improves dramatically with the attachment of a SO support battalion element to a SOTSE. This unit organization is a unique CSS unit designed to provide dedicated DS-level logistical support with enhanced operations security (OPSEC) to ARSOF when conventional CSS is unavailable or inappropriate. Its design is optimized for supporting ARSOF contingency operations. The unit can deploy rapidly and with low signature to support ARSOF operating from a remote or undeveloped base. There it can provide the mission-essential DS-level support normally provided to ARSOF by the direct support units (DSUs) of the supporting CSS element. It also provides interface with the general support unit (GSUs) of the senior logistics headquarters.

Nonstandard (ASOTSE) Support. ARSOF may use SO-peculiar and/or low- density items of standard and nonstandard configuration. ARSOF deal directly with the ASOTSE for SO-peculiar logistics that may be beyond ASCC logistics capabilities. These needs normally involve the resupply and maintenance of foreign, nonstandard, interagency, and SO-peculiar materiel. The SO theater support element (SOTSE) logistics planners make every effort to reduce this type of off-line support to ARSOF through their knowledge of ARSOF and anticipation of selected requirements. The method most commonly employed to anticipate requirements is thorough ARSOF unit planning. The ARSOF unit determines its statement of requirements (SOR) as it analyzes a type mission. The SOR is validated through operations channels but coordinated with the logistics planners' channels for feasibility. Requirements not feasible must be identified early so that alternatives can be developed. The SO support battalion can provide nonstandard (SO-peculiar) support based on its unique capabilities.

Foreign Nation Support. H N S is the preferred means to meet unresourced logistics needs within acceptable risk limits. It can include almost every aspect of logistics. The SOTSE has the capability to interface with numerous foreign nation agencies able to provide SO-peculiar support in the theater.

Support to MOOTW

The United States promotes the self-development of nations through the engagement of US resources and assistance. The military, and particularly the Army, performs roles in these types of operations. The primary focus of the Army is warfighting, yet its role in MOOTW is critical. The Army is often required, in its role as a strategic force, to support, protect, and further US interests at home and abroad in a variety of ways other than war. The Army conducts MOOTW as part of a joint force and often in conjunction with multinational government agencies. MOOTW may include support to US, state, and local governments, nation assistance, disaster relief, security and advisory assistance, technical assistance, countering drugs, antiterrorism, arms control, support to domestic civil authority, and peacekeeping operations.

Supporting MOOTW has special requirements and places special demands on the logistics system. The combatant commander must tailor CSS based on theater needs. In some cases, CSS units maybe the majority of the units involved in the operation. CSS tailored for this environment should be versatile enough to expand or contract quickly as the situation dictates. These operations are normally undertaken to avert crisis after a disaster response operation or in support of diplomatic initiatives. Regardless of the level of support provided, it should not overwhelm indigenous forces or cause them to become dependent on US largesse. Support to MOOTW must be integrated with and complement HN or local resources and activities. For information on support of MOOTW, see FM 100-19 and FM 100-23.

RECONSTITUTION

Reconstitution is an extraordinary action used to restore units to a desired level of combat effectiveness commensurate with mission requirements and available resources. No resources exist solely to perform reconstitution. Reconstitution planning and execution are proactive. During concept development, reconstitution must be an integral part of the process. Units with roles in the process train in advance to perform reconstitution tasks. Planners must consider the impact on reconstitution operations of operations in environments of weapons of mass destruction. Decontamination of NBC-contaminated units requires extensive logistics support. Planners at all levels of command should anticipate reconstitution. It is a total process whose major elements are reorganization, assessment, and regeneration.

Reorganization

Reorganization is a shift of resources within a degraded unit to restore its combat effectiveness. Immediate or deliberate, it may include such measures as—

- Providing thorough equipment decontamination support as required.
- Cross-leveling equipment and personnel.
- Matching operational weapons systems with crews.
- Forming composite units from two or more attrited elements to form a single mission-capable unit.

Assessment

Assessment measures a unit's capability to perform its mission. Commanders assess their units before, during, and after operations. Once it is determined that a unit is no longer mission-capable, even after reorganization, the unit's mission must be changed or removed from combat. A more thorough evaluation is then conducted to determine regeneration **needs.**

Regeneration

Regeneration, or rebuilding a unit, requires a large-scale replacement of personnel, equipment, and supplies. Because of the intensive nature of regeneration, it occurs at a regeneration site after the unit disengages.

Reconstitution requires command decisions at the JTF level and extensive coordination between the corps and the operational-level

CSS units involved. Since regeneration requires large numbers of personnel and equipment, commanders must balance these needs against those in other commands.

The senior logistics headquarters, based on direction received from the senior MMC in theater, will be deeply involved in replacing equipment and supplies. Depending on the type of unit being reconstituted, any of the functional or area commands maybe required to provide personnel and equipment as directed by the AS CC. For more details on reconstitution, see FM 100-9.

Chapter 4

Supply, Maintenance, and Field Services

The Army's tasks stem from its primary mission to organize, equip, train, and sustain Army forces for the conduct of prompt and sustained combat operations on land. The implied logistics tasks in support of this mission are to establish reserves of equipment and supplies, to provide for expansion of peacetime components, and to develop, supply, equip, and maintain bases and other installations.

SUPPLY

Supply operations involve the storage, distribution, requisition, protection, maintenance, and salvage of supplies. The flow of supplies into an operational area must begin prior to or concurrently—and be carefully synchronized—with the flow of units and personnel. Geography, availability of HNS and/or local procurement, the seasons, the threat, and many other factors influence supply operations. For example, desert operations require increased water and Class IX support, and an NBC threat requires increased capabilities for Class II and water. Supporting commanders, in coordination with the supported commander's senior logistics commander, must estimate supply requirements and initiate supply shipments to the operational area. This is commonly referred to as a *push* system. As time allows, the supported commander begins to submit demand-based requisitions for supplies, referred to as a *pull* system.

SUPPLY SUPPORT

Under management of the senior supporting MMC, their basic loads and pro-positioned stocks will support units during the initial stages of an operation. The senior engineer commander will coordinate closely with the MMC for Class IV (Construction Materials), which are generally bulky and heavy and are oftentimes available in the theater. If possible, they will be obtained locally, either from HNS or contingency contracting. Initially, Classes H, III (Package), and N supplies that cannot be obtained locally are *pushed* to the theater of operations. These supplies are shipped as far forward as possible to a GS or DS supply unit. Customer units place requirements on the DS supply unit designated to provide support and that unit either fills the request or passes a requisition to its supporting MMC. If the request cannot be satisfied from theater GS stocks, a requisition is passed to the appropriate NICP in CONUS. As the supply situation stabilizes or the theater transitions to the sustaining phase, supply support from the strategic level will shift from the *push* to *pull* system.

Requisition/Flow

Generally, units place demands for supplies and equipment on a designated supply support activity (SSA) responsible for providing DS either on a unit or area basis. In CONUS, the SSA could be organic to a TOE DSU or a TDA activity such as the installation supply division. In forward-presence locations, the SSA will normally be organic to a TOE DSU. In all cases, the SSA will either fill the demand or generate a requisition, which is passed to the supporting MMC or to the appropriate CONUS NICP. If the requisition is passed to the supporting MMC, it maybe filled from MMC-managed assets, passed to the NICP, or rejected. If passed to an NICP, the requisition will be filled or placed on back order, Regardless of the level at which a requisition is filled, items are packaged for delivery as far forward as practical. Ideally, they will be delivered directly to the unit that initiated the demand.

In CONUS, supplies generally are moved from a variety of storage locations to the container consolidation point (CCP) at the defense depot that services the requisitioner's

geographic region. Some orders may be shipped from a CONUS depot directly to the requisitioner. For instance, ammunition and general supplies that involve full container loads to a single consignee, that require special handling, or are oversized may bypass the CCP. Emphasis will be placed on packaging supplies in CONUS in unit configuration for direct delivery as far forward as possible. This will minimize the handling of the supplies as they move through the distribution system.

Consolidated or containerized loads maybe designated for single or multiple consignees. A consolidated load is shipped to the appropriate level SSA in the theater. If the container contains multiple consignees, it will be packed to maintain consignee integrity, and documentation will be inside the containers. ITV is enhanced by the use of electronic documentation transfer coupled with coded machine-readable documentation on the outside of containers and packages. This affords supply managers TAV, allowing them to track supplies from origin to final destination. TAV affords flexibility and responsiveness to the distribution system by enabling the rerouting of supplies due to higher priority requirements or a consignee move to a different location.

ALOC-eligible supplies (Class IX and maintenance-related Class II) will be routinely airlifted into the operational area based on aircraft availability. Heavy tonnage Class IX materiel, such as track, track pads, and roadwheels, is normally moved by surface means unless a validated urgency of need (IPG- 1) dictates airlift.

Stockage

CONUS SSAs will not maintain wartime stocks. Forward-presence SSAs in DSUs at echelons above division (EAD) are authorized to establish the combat authorized stockage list (ASL) and other stockage requirements for commodities required during the initial stages of war.

Forward-presence GSUs will maintain a level of combat-essential repair parts to satisfy high-priority requisitions and to account for interruptions in the distribution system. The number of items maintained must be based on anticipated wartime usage rates. Beginning with the transition-to-war phase, the number of items maintained will be adjusted to the wartime demand.

Adequate APA, AWRS, or intermediate support-base capabilities must be maintained to meet the force projection needs of the theater until SLOC can establish resupply from CONUS. AWRS can be positioned in the COMMZ or other designated area, while additional supplies and materiel should be positioned within the corps areas to meet immediate needs at the onset of war. This dispersion of stocks also reduces vulnerability.

In multinational operations, each nation is responsible for its own logistics and administrative support. If multinational operations are anticipated, alliance directives or bilateral agreements may specify stockage objectives. The President or Congress must approve these objectives if support is to be provided to another nation as part of a coalition force. A properly developed LPT plan should identify these types of requirements soon enough to allow for approval lead time. The plan should identify mutual support requirements and capabilities. Formal peacetime agreements should be established between member nations detailing the logistics support, as well as HNS, that will be provided during the transition and sustaining phases of war. Such agreements, along with a thorough risk assessment, will provide a basis for logistics planners to adjust stockage and the logistics force structure.

LOGISTICS BASE

A logistics base (log base) is any grouping of logistics elements—DS, GS, or LSE—formed for a specific purpose. It can be formed from a single, small, specialized organization to one made up of various units. For instance, if a unit is required to make a long movement prior to launching an attack, the logistics commander may elect to establish a log support base at an intermediate point along the route of movement. This base could be tailored to provide supplies that are expected to be consumed during the movement, such as Classes I and III and water. If the moving unit is expected to test-fire its weapons during

movement, Class V could be included. If the movement is over an exceptionally long distance, more than one log base may be required, based on time/distance factors.

A log support base may be established for an entire theater of operations. In this case, it could be composed of a wide variety of DS, GS, and LSE organizations. A theater log base would have the responsibility for receiving all supplies, personnel, and units moving into the theater and preparing them for onward movement to their ultimate destinations.

PHASES OF SUPPLY

Supply operations are viewed in four phases: peacetime, transition to war, sustainment, and reconstitution. Actions taken during each phase directly impact subsequent phases.

Phase I - Peacetime

During times of peace, planning is continuous. The peacetime focus is on readiness. The CSS planner examines all potential areas of operation and develops a plan for the LPT, which becomes the framework to determine where, when, and how to deploy limited resources. The purpose of LPT planning is to minimize the logistics impact on the strategic lift required to project the force. During peacetime, both CONUS-based and forward-presence activities are supplied primarily from the CONUS support base. Units focus on refining and maintaining their basic loads and prescribed load lists (PLLs), while supply support activities focus on developing and refining the ASL used to support customer demands. More information on LPT is in Appendix B.

Phase II - Transition To War

The transition to war begins with advance warning of an impending crisis and continues through the initial stages of war when forces have been deployed and resupply operations from CONUS have been established and stabilized. During this period, the primary source of supply shifts to AWR and unit stocks with emergency resupply through the ALOC. As AWRS and ASL items are issued, operational-level CSS personnel must prepare for the continued sustainment of the force by—

- Calling forward CONUS Army reserve stock and preplanned supplies.
- Preparing to receive and distribute CONUS-based Army reserve stock.
- Preparing to receive units and subsequently move them forward.
- Initiating cancellation action, at the direction of the MMC, on any outstanding requisitions deemed nonessential for combat or for individual health and welfare.
- Establishing the surface LOC from the PODS forward to the tactical level of CSS.
- Initiating theater wartime requisitioning procedures and management of theater-controlled stocks.
- Initiating split-based operations for the management and distribution of materiel.
- Ensuring the capability to screen nonstockage list (NSL) items so that only combat-critical items are requisitioned from CONUS.
- Ensuring the capability of the appropriate level MMCs to continue requisitioning ALOC items directly from CONUS sources.
- Providing the capability for acquiring, repairing, maintaining, and constructing facilities or obtaining from the HN those facilities required to establish LOCs.
- Calling forward portions of the LSE to assist in receiving, processing, storing, and transporting materiel and personnel for sustained combat operations.
- Providing the capability for essential field services.

During the transition phase, force projection forces will deploy with sufficient supplies and equipment to sustain themselves until resupply operations can be initiated in the operational area. Supporting commanders, in coordination with the supported commander's senior CSS command, must estimate supply requirements and initiate *push* shipments of supplies to the theater.

The requisition flow will be the same during the transition to war as in peacetime. The appropriate level materiel manager will continue to screen high-priority non-mission-

capable supply (NMCS) requisitions for availability and fill. Requisitions that cannot be filled from within the theater will be passed to the appropriate NICP in CONUS. The transition phase ends when the SLOC has been established, operating supplies are being received from CONUS, and the necessary support structure is in place to support the deployed force. This also begins the sustainment phase.

Phase III- Sustainment

During sustainment, the requisition and supply/materiel flow will continue as described in the transition phase. The SLOC and ALOC have been established and replenishment requisitions are based on anticipated requirements, the demand history, the overall campaign plan, and the commander's intent. During this phase, the senior supporting MMC will continue to be the principal manager for supplies and materiel entering the theater or operational area.

Supplies, other than throughput shipments, flow primarily to operational/ theater GSUS. As directed by the supporting MMC, the GSUs will provide supplies/materiel to DSUs and other GSUs. DSUs issue supplies and materiel to their customers, the ultimate users.

Materiel managers work closely with movement managers to insure that supplies and equipment are moved according to priority. This close relationship, coupled with the improved automation and communications that enable TAV, including ITV, is the genesis of the emerging theater distribution system and total distribution system (TDS). When fully implemented, the TDS requires fewer stockpiles, reduces layering and handling, and improves the overall responsiveness of the distribution system. See Appendix C for more information on the TDS. AR 710-2 contains additional information on wartime supply stockage levels,

Phase IV- Reconstitution

Consideration must be given to establishing a requisition flow, increased requirement projection, and accountability for a surge on the supply system based on reconstitution. A detailed inspection of equipment is made and components are replaced if unserviceable due to extensive use or environmental impact. In many cases, the LSE will perform this phase.

CLASSES OF SUPPLY

In accordance with the CINC's logistics priorities, the MMC and LSE provide direction for receipt, storage, and issue of theater stocks. When the required stocks are not available or stock replenishment is required, the senior supporting MMC passes requirements to the appropriate CONUS NICP. When practicable, arriving shipments will be throughput from the port directly to the requisitioning GSUs/DSUs. Otherwise, shipments will be directed to one of the operational-level GSUs with the appropriate storage capacity. At the operational level, the supporting MMC manages Class I, II, III (Package and Bulk), IV, V, VI, VII, and IX supplies, unclassified maps, and water. Appendix E provides a quick reference to classes and subclasses of supply.

Class I Supplies

Class I supplies consist of both perishable and semiperishable subsistence items—or rations. Gratuitous health and welfare items are also included. Subsistence items are packaged as individual or group meals. While the provisioning of subsistence items is a supply function, the system for preparing and serving meals is classified as a field service. The supply function is discussed here, and food preparation and serving under the field services section of this chapter.

Class I items are initially *pushed from* CONUS or other sustaining locations to the theater or operational area. The mix of perishable and semiperishable rations will depend on the CINC's feeding policy, the arrival dates of units capable of handling Class I items, and the availability of refrigerated storage, both at the PODS and at forward locations. When the situation stabilizes and the stockage levels have been met, a pull system will be effected. In both the *push* and *pull* systems, Class I supplies arriving in the theater will be moved to a GS or a DS supply unit capable of handling them. GS supply units will issue to other GS units, but primarily to DS supply units. DS supply units will issue Class I

items to their customers, the consuming units. They will stock Class I supplies based on unit strength reports submitted by the units they support. Currently, the supply point method is used to issue Class I items to supported units. See FMs 10-1 and 10-23 for more details on Class I supply operations.

Individual meals. Deploying units carry meals ready-to-eat (MREs), which are generally the individual operational rations. They are best suited for intense levels of combat or when soldiers are in transit. Individual meals are used any time group meals are not feasible. Supplemented with fresh fruit and milk, they will sustain unit personnel until the capability to provide, prepare, and serve group meals is established.

Group Meals. Group meals are made up from A-, B-, or heat-and-serve rations. They can be prepared by the heat-and-serve method (heat-and-serve rations) or the full-scale, raw food preparation method using a combination of A- and B-ration components.

Classes II, III (Package), and IV

Classes II, III (Package), and IV represent a broad range of general supplies that are less visible than other commodities. Nevertheless, they contribute significantly to the support of the mission. Class II consists of items such as clothing, individual equipment, tentage, organizational tool sets and kits, hand tools, maps, and administrative/housekeeping supplies and equipment. Class III (Package) consists of packaged POL products that can be handled in basically the same manner as dry cargo. Class IV consists of fortification, barrier, and construction materials.

Class III (Bulk) Supplies

The responsive supply of Class III (Bulk) is critical to battlefield success. The senior supporting MMC centrally manages, controls, and allocates it in accordance with the ASCC's priorities. The operational-level commander, in coordination with the senior CSS commander, is responsible for providing bulk petroleum to US land forces. Support to multinational forces is based on established agreements.

Petroleum Operations. The availability of fuel depends on the location of the theater of operations. If operations are in an industrialized area, initial supplies may be obtained from HN or contractor support. Tanker ships will bring in subsequent supplies through marine petroleum terminals. In an undeveloped area, Air Force aircraft may effect the initial resupply. In these "emergency" type situations, the fuel bladders may be discharged directly into the operating units' support vehicles. As soon as practical, the Navy's offshore petroleum discharge system will provide bulk fuels in over-the-beach operations. The Navy is responsible for providing fuel to the high-water mark on the beach. The Army then assumes responsibility for the fuel through its tactical petroleum terminals.

Petroleum Organization. The senior petroleum unit commander—the primary petroleum distribution operator—is responsible for all aspects of theater-level petroleum distribution and related supply operations. Distribution planning is the basis for the design, construction, and operation of the theater petroleum distribution system. The petroleum unit is also responsible for quality surveillance and liaison with the senior supporting MMC as well as with the supported multinational forces. It will distribute fuels based on ASCC-established priorities and senior supporting MMC directives. Stockage policy is covered in AR 710-2. Additional information on petroleum operations and organizations is in FMs 10-1 and 10-67.

Distribution. Operational-level petroleum units (petroleum pipeline and terminal operating) will establish the petroleum support base for receiving, temporarily storing, and moving fuels to the GS petroleum supply units. These units, located at the operational and tactical levels, deliver fuels to the divisional and nondivisional SSAs. Movement may involve various modes of transportation. Pipelines—the most efficient mode—will be used to deliver the product as far forward as practical, usually to the division rear area. Air bases and tactical airfields are serviced by pipeline when feasible. Pipeline distribution is supplemented primarily by tank vehicles, with

rail cars and barges being used when available. Figure 4-1 depicts Class III (Bulk) requirements and supply flow in a theater of operations.

Joint Petroleum Office (JPO). A unified commander may establish a JPO to provide staff management of petroleum at the theater level. Subarea petroleum offices (SAPOs) may be established at the subunified command level to provide in-country staff responsibilities for all services, More information on the JPO can be found in DOD 4140.25-M.

Class V

The mission of the ammunition system is to provide the right ammunition to the force where and when needed. Providing this support to a CONUS-based force projection force in a new theater presents various new challenges along with those associated with supporting a forward deployed force. While the quantity and volume of stocks will likely be less than those required in the past, the enhanced lethality of our modern weapons systems requires that Class V be intensively managed to ensure availability and combat readiness. Additionally, the joint, coalition, and contingency response nature of future military operations requires that the supporting Class V logistics system be highly tailorable, deployable, and flexible.

The ARFOR commander establishes priorities for theater Class V supplies, giving priority to the most common and critical types of ammunition. The highest level army MMC in theater coordinates the shipment and delivery of stocks from CONUS in accordance with the CINC's logistics support plan. Shipment will be by either surface ships or air delivery. To immediately support rapid deployment forces, initial shipment will likely be by air followed by

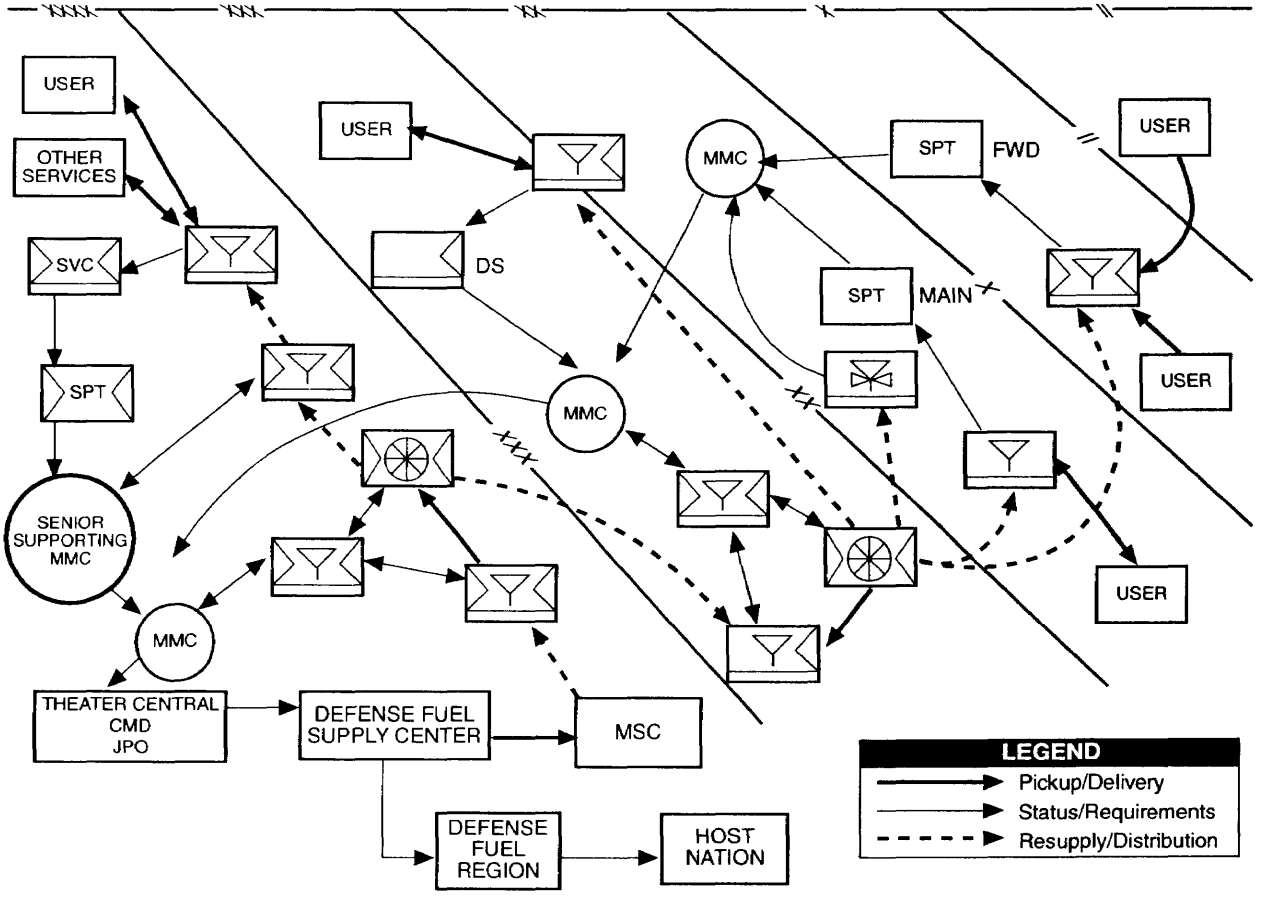


Figure 4-1. Bulk Petroleum Distribution in a Theater of Operations

AWR-3 ships and then surge shipping. The ARFOR and CINC logistics planners must consider total force ammunition requirements in a contingency response environment when planning for the movement of stocks and support forces. The CINC cannot request containerized ammunition for rapid deployment and throughput unless sufficient container handling units are in theater to handle and reconfigure it. Ammunition support initiatives designed to improve logistics projection into and the sustainment of the theater include:

- Ammunition accountability detachments (port)—small, rapidly deployable teams of highly skilled quality assurance specialists, ammunition surveillance, and LSE personnel whose mission is providing initial Class V management and accountability at aerial and sea PODs.
- Small rapidly deployable autonomous platoon-size modular ammunition units, which can provide either container or noncontainer ammunition lift support for the force. If sufficient modular units are deployed, a C^2 headquarters can be deployed to realign these modular units into a company-size element.

FM 9-6 details current ammunition distribution doctrine, which is a maneuver-oriented ammunition distribution system with palletized loading system (PLS)(see Figure 4-2). This system reflects full mature theater support with theater, corps, division, and brigade formations in a linear battlefield, utilizing a combination of containerized and BB stocks, combat-configured loads (CCLs), and non-PLS and forward PLS distribution to combat using battalions.

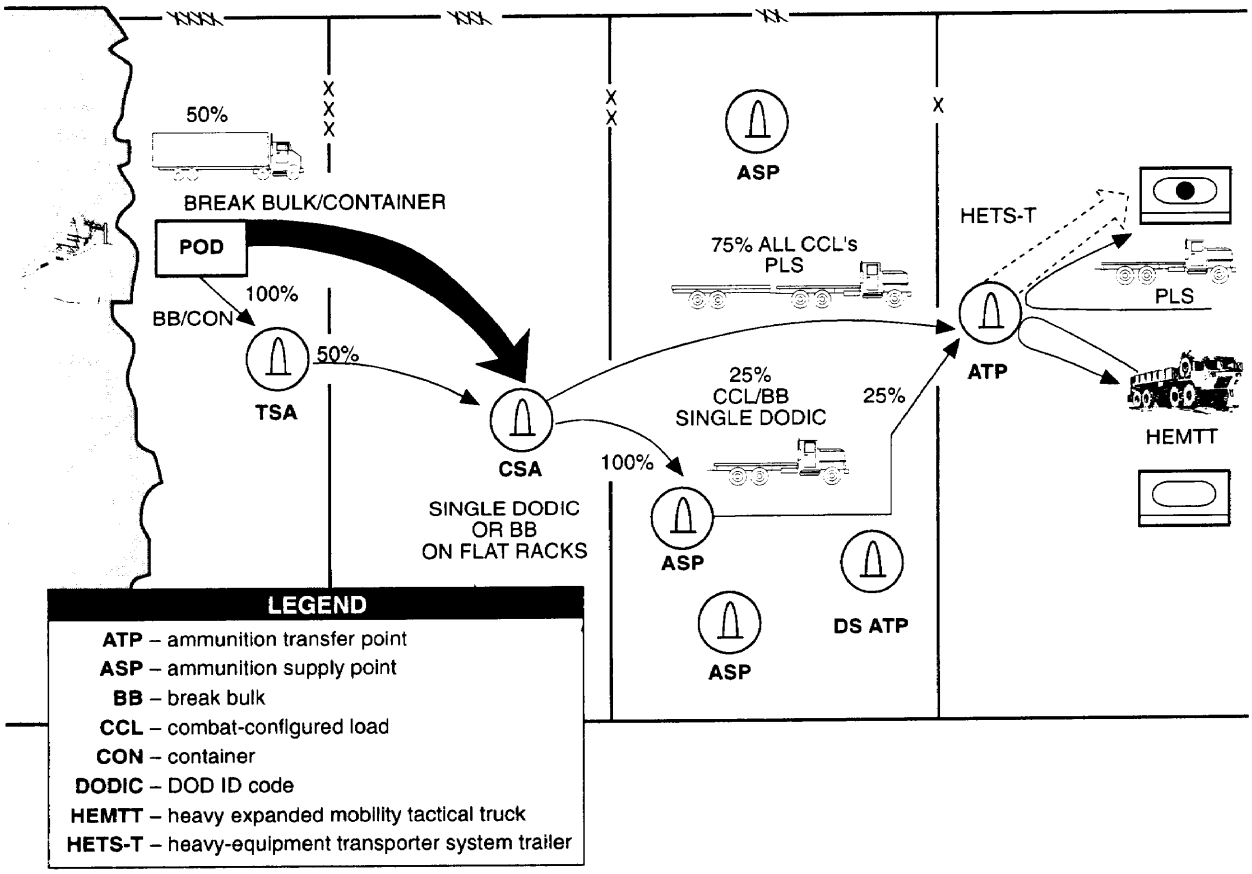


Figure 4-2. Conventional Ammunition Supply in the Theater

Theater ammunition sources include ammunition basic loads (ABL), AWR3 afloat, AWR stocks, sustainment base production stocks, and other sources such as compatible multinational force ammunition available in theater or shipped from OCONUS sites.

Ammunition Basic Load. The ABL is those stocks carried by the forces and their organic equipment. Designated by the ASCC within each unified command based on METT-T, it should be sufficient to sustain operations until supply can be established. The two types of ABL are to-accompany-troops (TAT) —that Class V that can be deployed directly with the force—and non-TAT, such as high-explosive munitions—that is, grenades, AT-4, mortar ammunition—that, for safety or lift reasons, cannot be carried as the force deploys to the theater.

Army War Reserve 3 Afloat. AWR3 afloat includes ammunition preconfigured on logistics ships that is available for discharge into the theater to provide rapid initial support to a deploying force.

Army Reserve Stocks. Pre-positioned assets are available on a regional basis as follows:

- AWR.1 (formerly ARl) in CONUS consists of AWRS and AWROP stocks only.
- AWR2 (formerly AR2 and POMCUS) in Europe consists of AWRS, AWROP, and AWRPS.
- AWR3 (formerly AR3) afloat consists of AWRS, AWROP, and AWRPS afloat.
- AWR4 (formerly AR4) in the Pacific region consists of AWRS, AWROP, AWROPS, and WRSA-k.
- AWRPS-Korea is planned for the near future.
- AWR5 (formerly AR5) in SWA Region will consist of AWRS, AWROP, and AWRPS.

Sustainment Base Production Stocks. These are stocks that, if required, the CONUS industrial base produces and ships into the theater.

Note: Ammunition is no longer managed by days of supply. The current reference is combat load, which is measured by the amount of Class V a unit can carry into combat on the combat weapons system. In the case of field artillery, the reference is battalion load, which is the amount of Class V that an artillery battalion can move with its organic and armored resupply vehicles and can upload on weapons systems.

Class VI

Sales teams operating fixed-area facilities and tactical field exchanges may establish essential post exchange (PX) services at the operational and tactical levels of CSS. In the early stages of war, essential exchange stocks may be turned over to the theater supply system. The ASCC can request health and comfort packages and female sundry packages, which will be issued gratuitously with Class I supplies. Health and comfort packages contain health and sanitation items–such as toothbrushes, toothpaste, and razors–and personal demand items. The female sundry packages contain additional health and comfort items for female soldiers. As the theater matures and conditions permit, exchange activities can be established or expanded and a wider variety of items can be sold. Class VI items forwarded to the theater are based on personnel strength figures. See FM 10-27 for more details.

Class VII

Class VII supplies consist of major end items such as launchers, tanks, mobile machine shops, and vehicles. Major end items are a final combination of end products that are ready to use. They represent a low percentage of the total line items but a high percentage of the total dollar value of the Army inventory. Because of the high dollar cost and their overall importance to combat readiness, major end items are usually controlled through command channels; otherwise, the senior supporting MMC controls them. The requisitioning, distribution, maintenance, and disposal of these items are intensely managed at each support level to ensure visibility and operational readiness. Major items are

controlled and distributed in accordance with carefully developed theater distribution plans and directions. Figure 4-3 depicts Class VII requisition and materiel flow.

The intensity of future battles will produce heavy losses of both personnel and materiel. Weapon systems complete with on-board spares, a basic load of ammunition, and a trained crew will have to be replaced quickly and efficiently. This operation is referred to as weapons system management, which is controlled by an appointed weapons system manager (WSM), normally at the tactical level of supply (division and corps). The operational level of supply (COMMZ) is responsible for issuing a weapon to the corps or division in a ready-for-issue condition. All ancillary equipment will have been installed, the vehicle fueled, and basic issue items placed on board. The appropriate level WSM will, when appropriate, link the ready-for-issue weapon to its basic load of ammunition and a trained crew, requiring the WSM to coordinate replacements with personnel managers. The ready-for-issue weapon is now a ready-to-fight weapon system. More details on WSM are in FM 63-3.

Class VIII

Units deploy to the AO with their combat unit basic load (UBL). DS and GS units deploy with their ASLs. In all cases, stockage will be consistent with the nature of the contingency mission, the threat, climate, geography, and other factors associated with the AO. See Chapter 7 for more details.

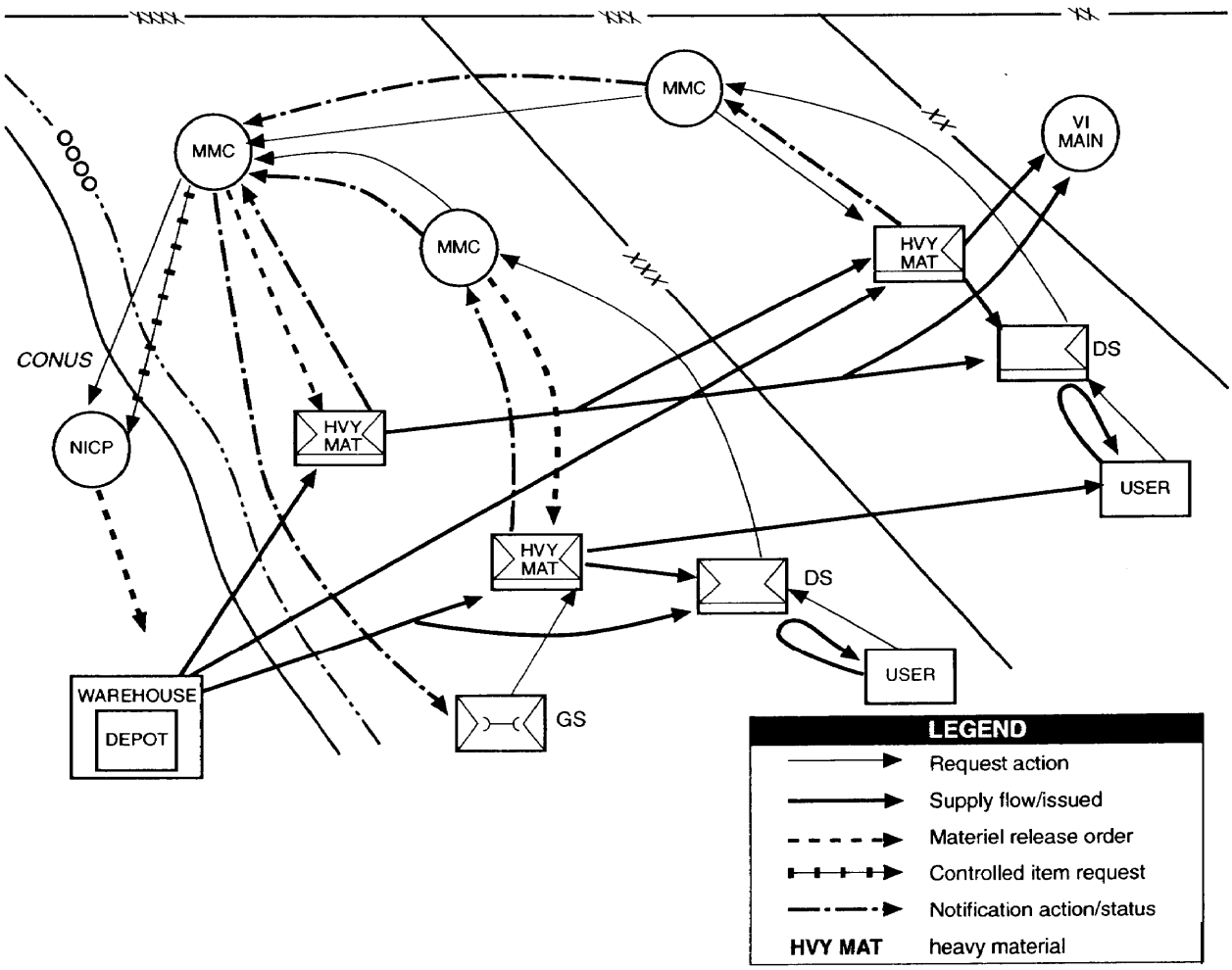


Figure 4-3. Class VII Requisition and Supply Flow

Class IX

Class IX items—repair parts—consist of any part, subassembly, assembly, or component required in the maintenance or repair of an end item, subassembly, or component. They support the maintenance and repair functions performed throughout the theater on all materiel except medical.

The MMC at the appropriate level manages Class IX supplies. The degree of management is generally proportional to the contribution repair parts make to the operational readiness of the end items they are supporting, Items, such as major assemblies, that directly affect the ability of the end item to operate in combat receive particular attention. Another factor affecting management is the item's dollar value. Combat-essential and high-dollar-value items are intensely managed at all levels. Low-cost, noncombat-essential items may be managed within the established parameters of the automated systems at the various echelons of supply, thereby allowing the manager to concentrate on fewer items.

The operational level of Class IX supply focuses on providing a GS level of supply that provides a safety level for all repair parts and a level of stockage for the items that will not be sent to the theater via ALOC. Easing these supply requirements are the serviceable assets that GS maintenance repair of line replaceable units will generate. These theater-generated assets can offset the requirement to support from the strategic level of supply.

ALOC cargo will arrive daily at predetermined in-theater aerial ports. Most Class IX ALOC items will be delivered directly to the requesting SSA, normally organic to a maintenance unit. The remaining Class IX ALOC items will be delivered to a repair parts supply company at the GS level, either corps or EAC. Air-eligible Class IX support begins when the ALOC is established, but non-ALOC support—except for emergency situations—must await SLOC establishment. FM **10-1** and FM 10-27 contain additional information on Class IX supply. Figure 4-4 depicts Class IX requisition and materiel flow.

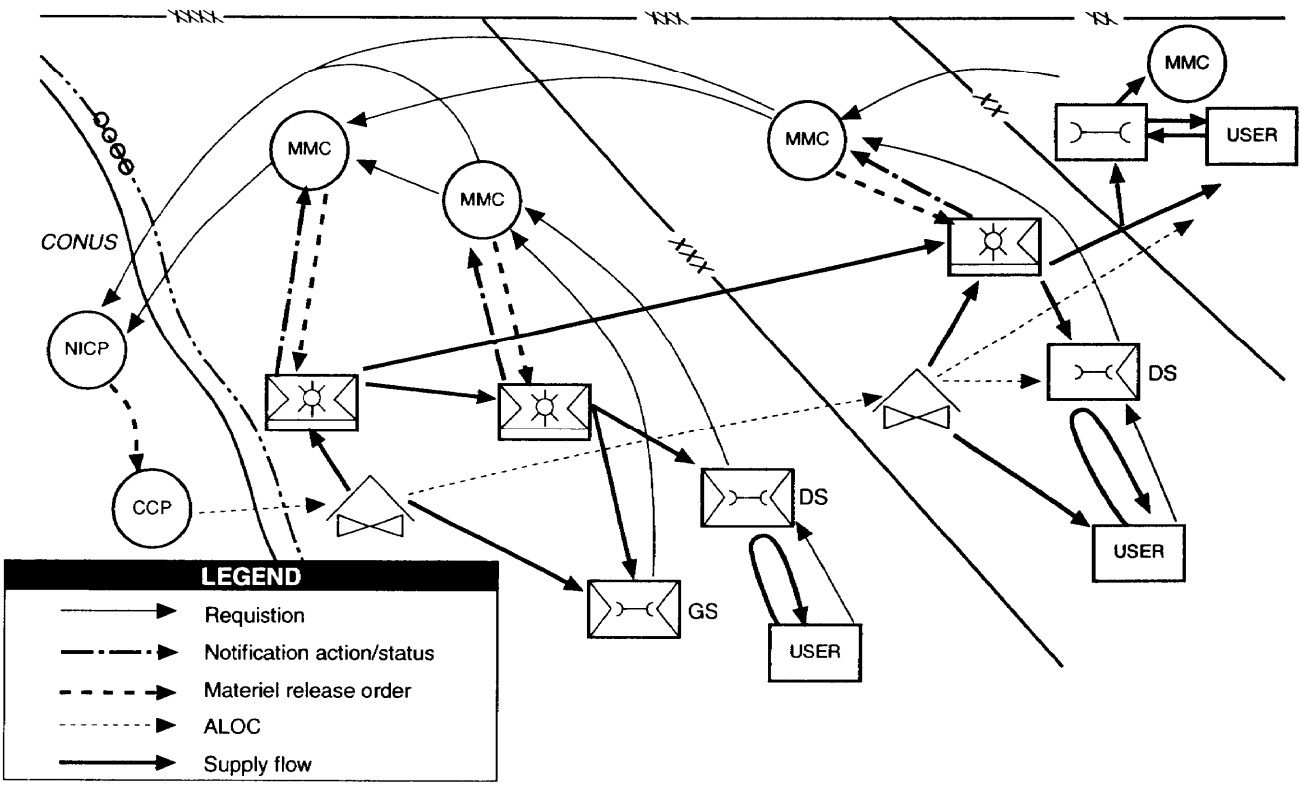


Figure 4-4. Class IX Requisition and Supply Flow

Class X Supplies

Military sources may provide some supplies to the civilian population if the territory's resources are inadequate. In addition, civil agencies of the US government and private charitable organizations may provide supplies for civilian consumption that may or may not be distributed through military channels. Military forces may also be required to plan and provide humanitarian assistance to host nations or other foreign countries. This assistance will require extensive coordination with the HN government to ensure the development and building of their national structure. For details on CA supply, see FM 41-10.

Maps

Unclassified maps will be handled in the same manner as Class H items. However, at the GS level, supply units will require augmentation due to the volume of maps received, stored, and issued. Requesting units will place demands on the supporting DS supply unit and, if the requested maps are on hand, the DS unit will issue them. If not, the DS supply unit will manually requisition the supporting MMC. If the requested maps are available in theater GS stocks, the MMC will direct their issue. Otherwise, a requisition will be passed to the DMA, which provides standard maps. Classified maps will be requested through operational channels. Figure 4-5 depicts Classes II, III (Package), and IV and map requisition and supply flow in a theater of operations.

Water

The senior CSS planner on the ASCC's staff develops the water distribution plan for the theater and supervises the commander's priorities and allocation procedures. The senior-level MMC monitors water priorities and allocation procedures and provides the commander with supply information.

Water is a critical combat commodity that may require intensive management and control. In addition to drinking and cooking, it

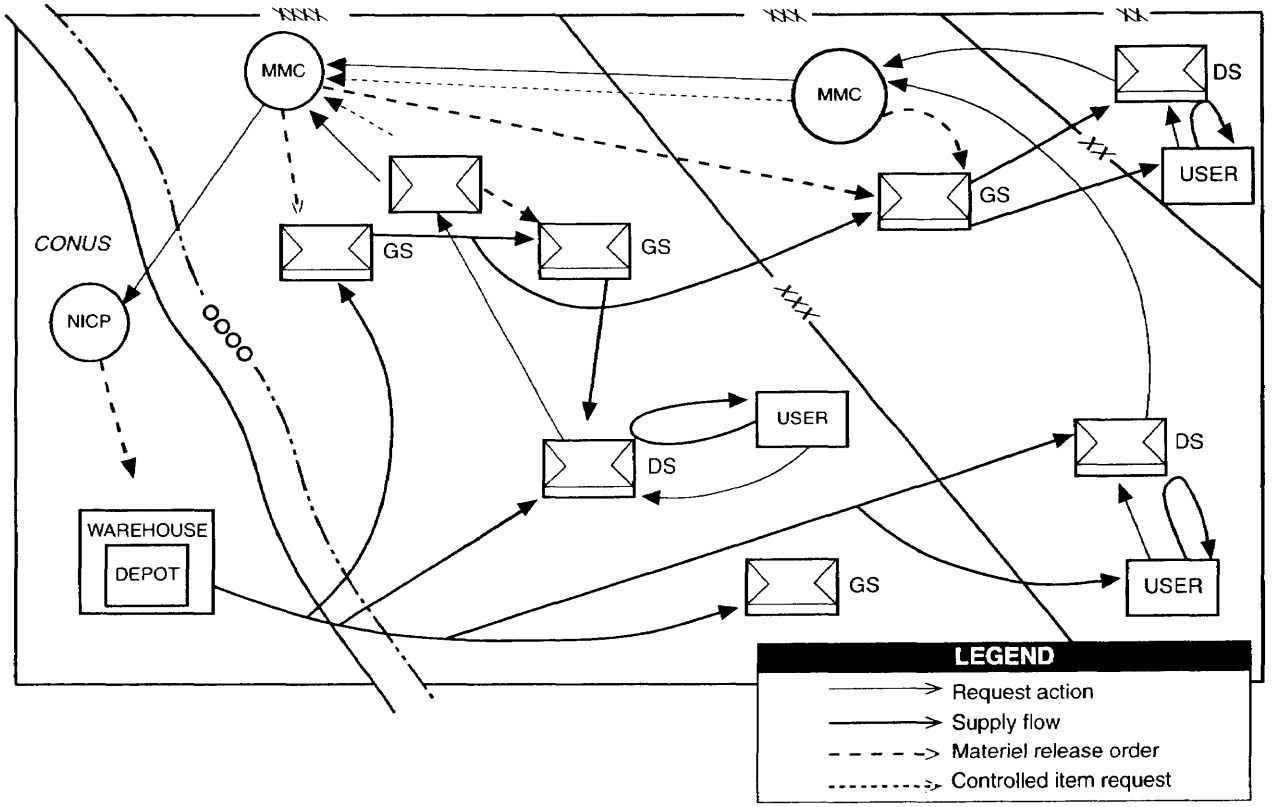


Figure 4-5. Class II, III (Package), and IV, Map Requisition, and Supply Flow

is required for sanitation, construction, decontamination, and maintenance. The amount of water required depends upon the regional climate and the type and scope of operations. Water purification is considered a field service function, and storage and distribution a supply function.

In most regions of the world, surface water is readily available and DS purification, storage, and distribution capabilities are sufficient. However, when well drilling is necessary, the senior engineer command in the theater will assist CSS personnel by locating and then drilling in the most appropriate places. Divisional units have organic DS purification, storage, and distribution capability. Nondivisional units receive DS water support from an echelons-above-division DS supply company that has purification, storage, and distribution capability. These DS units provide support on a unit or area basis. In those cases where surface water is readily available, no GS water support is normally required. Figure 4-6 depicts water support operations in nonarid regions.

In an arid environment, available water sources are limited and widely dispersed. Surface fresh water is almost nonexistent, and the availability of subsurface water varies within geographic regions. This lack of water sources mandates extensive purification, storage, and distribution. GS water units provide this capability. Once a suitable water source is found, it must then be treated through a process of reverse osmosis before it becomes a routine item of supply. For that reason, water purification has been identified as a field service. Figure 4-7 depicts water support operations in an arid region. FMs 10-1 and 10-52 contain additional information on water support operations.

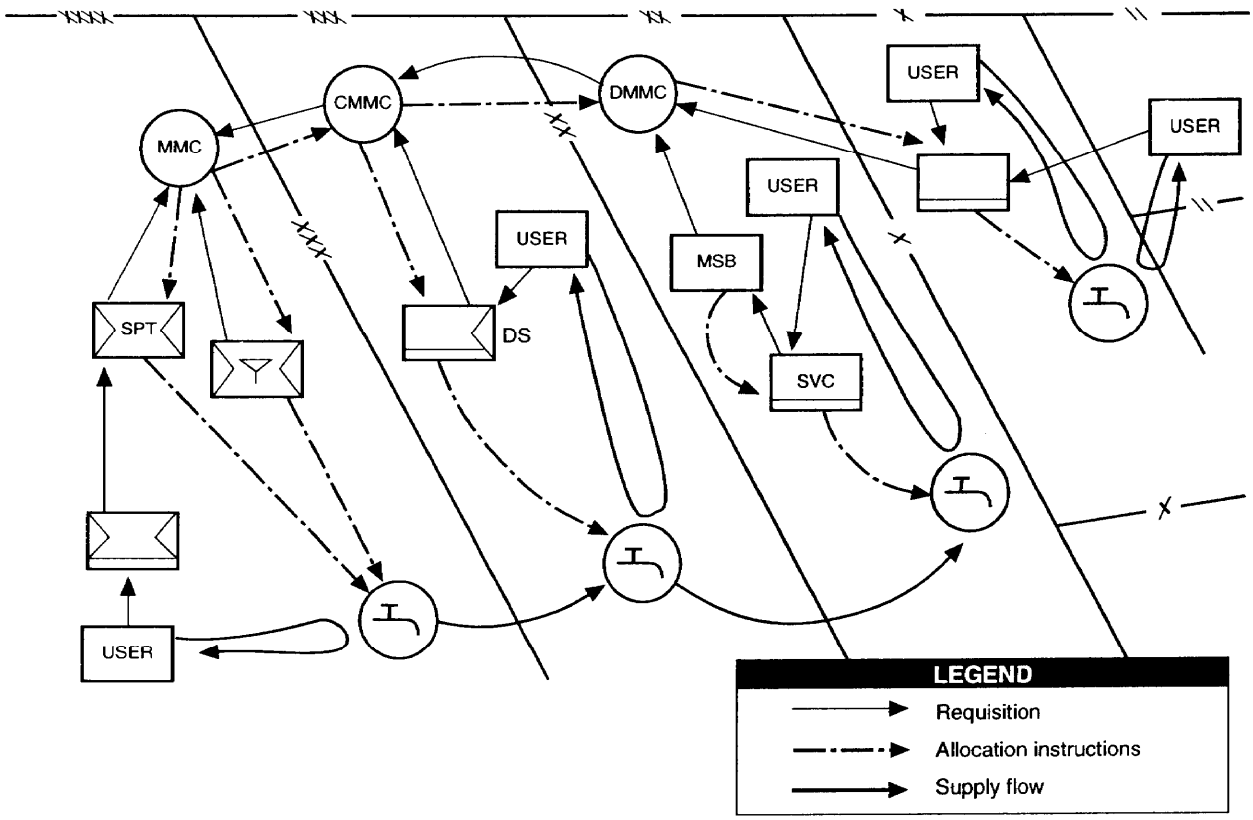


Figure 4-6. Water Support in Nonarid Regions

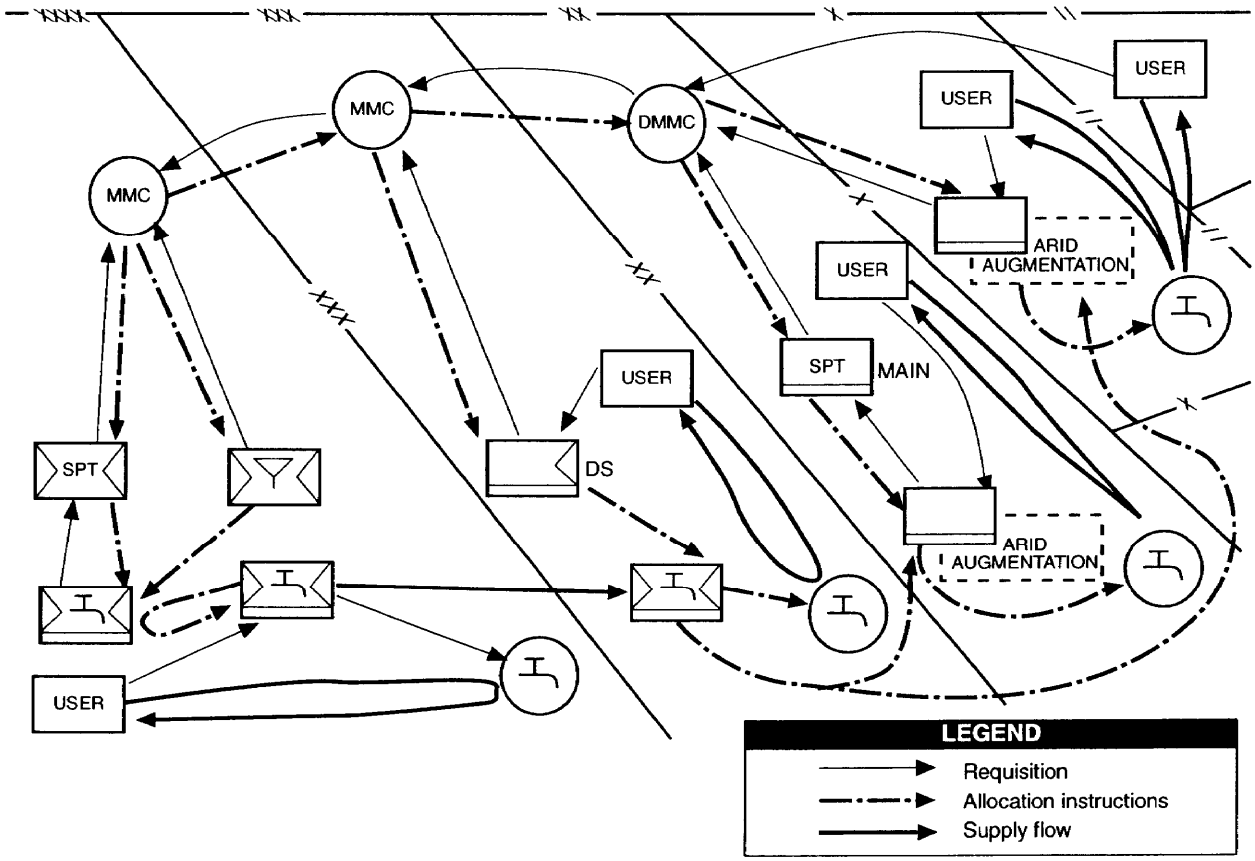


Figure 4-7. Water Support in Arid Regions

MAINTENANCE

During the transition phase, all maintenance resources are concentrated on repair and return of systems to operational condition. Operational maintenance resources will be prepared to supplement and back up corps units. The LSE and commodity facilities, equipment, and maintenance personnel that are not moved forward will concentrate on repair of major items and assemblies.

The fundamental principle of maintenance in a theater of operations is to minimize the time required to return operational equipment to combat forces by fixing items as far forward as possible. This is accomplished by—

- Extensively using DS maintenance elements with support teams and GS maintenance elements to classify and repair items in forward areas. Collection and classification companies inspect and determine the serviceability status of reclaimed combat-damaged equipment and preserve and dispose of serviceable and unserviceable Class VII and IX and similar foreign materiel. The integration of the LSE into the maintenance scheme will also provide a total spectrum of maintenance, diagnostics, and repair.
- Repairing by replacement—making maximum use of repairable and controlled exchange or cannibalization when authorized—at maintenance collection points when repair parts are not readily available.
- Performing only combat-essential repairs when units are in contact and deferring other services until time and the tactical situation allow.
- Having the organization that can return the item to a serviceable condition in the least

time perform repairs at the breakdown or damage site.

- Recovering damaged and failed equipment as quickly as possible.

Maintenance of critical systems will normally be emphasized. Operational maintenance must be designed to support the initial stages of an operation and, at the same time, establish a base designed to perform the more detailed maintenance required as the operational force matures.

The senior MMC manages maintenance capabilities in the area of operations. It sends maintenance support teams (MSTs) forward to establish forward repair activities. The MSTs work with tactical maintenance elements to repair forward, The LSE also sends MSTs to forward activities to form a seamless maintenance structure. The forward repair activities remove and evacuate components that cannot be repaired forward back to operational-level GS repair facilities. The theater maintenance support system is shown in Figure 4-8.

OPERATIONAL-LEVEL MAINTENANCE

At the operational level, the maintenance capability is organized to provide DS and GS maintenance to units in and passing through the COMMZ, to provide DS maintenance support to backup tactical-level organizations, and to provide GS maintenance support. Conditions imposed by the integrated battlefield may limit formation of large, consolidated maintenance facilities that are vulnerable to attack. However, situations may arise where clustering of some facilities maybe

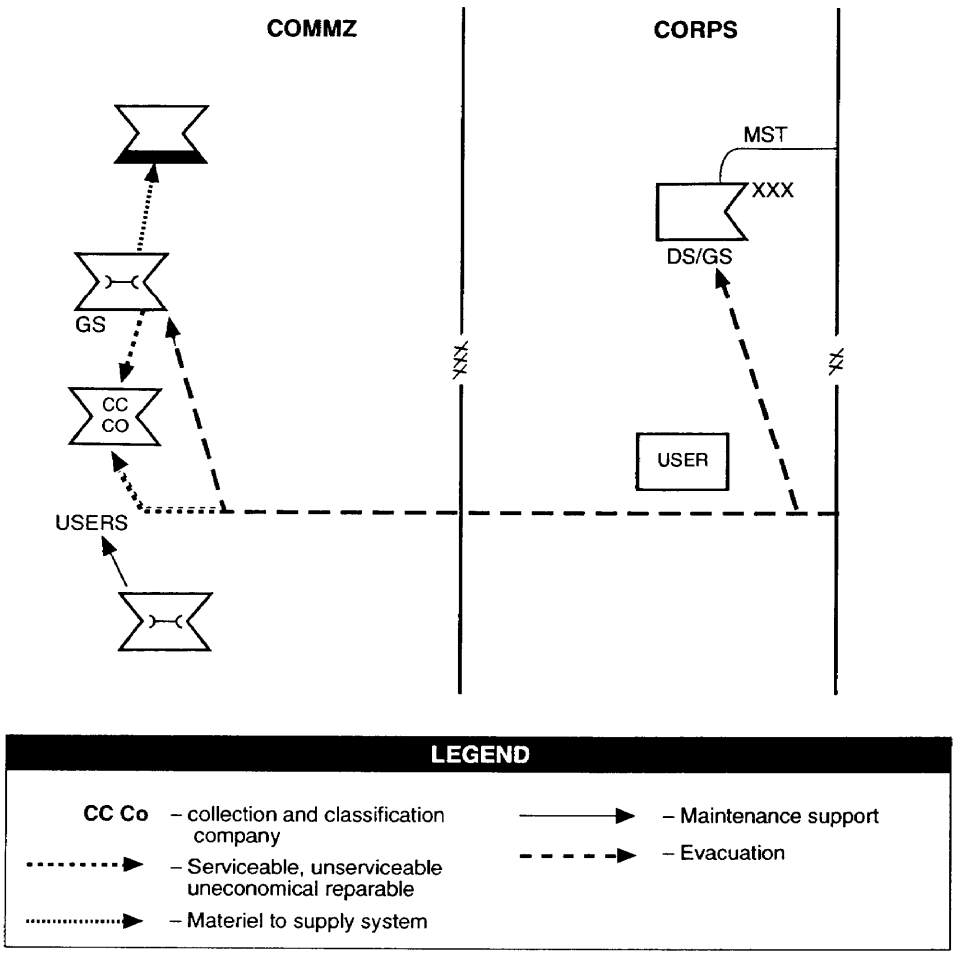


Figure 4-8. Theater Maintenance Support

necessary and possible. Operational-level organizational principles for maintenance support are designed to-

- •Conserve resources within the scope of mission accomplishment.
- •Have the survivability, mobility, and communications necessary to support on the battlefield.
- •Reduce the maintenance burden on forward elements.
- •Concentrate on rapid return of equipment to the user and the supply system.
- •Allocate critical maintenance skills to support requirements that contribute the most to operational availability.
- •Balance the approach to total system support and requirements determination. (Contaminated equipment will add to the time assessment for repair.)
- •Establish procedures to obtain maintenance support, as needed, from LSE or HN maintenance organizations and civilian contractors.

The appropriate MMC identifies materiel on which repair efforts are concentrated. Maintenance units provide backup recovery support and coordinate the evacuation of customer equipment that exceeds the DSU's repair timelines, capability, or capacity. Normally, if the DSU cannot repair the equipment within a specified time, it is transferred to a supporting DSU, serviced by a maintenance support team, or evacuated to a maintenance unit in the rear. The senior logistics organization MMC may direct that equipment be evacuated to a GS maintenance unit in the COMMZ.

ELECTRONIC MAINTENANCE

The technical design and tactical employment concept determine the CSS concepts for air defense and surface-to-surface missile systems. Complexity varies among missile systems and demands system-unique support structures for supply and maintenance. DS maintenance is built on the principle of the MST and the base maintenance facility. These maintenance assets are allocated and accompany the supported units throughout the theater, based upon the commander's tactical plan.

GS and depot repair activities are also located at operational level and provide support to all missile DS maintenance units in the theater. GS and depot maintenance provide the same basic functions and are addressed as one type of maintenance—GS and depot. GS and depot missile system maintenance units maintain the theater ASL for all supported missile systems and provide missile parts supply for the theater. The LSE may also perform depot-level missile maintenance.

Missile systems have a high degree of technological diversity. The maintenance support must be specifically tailored for each weapon system. Refer to FMs 9-59, 44-71, and 44-94, and AR 750-1 for additional information.

SPECIAL MATERIEL MAINTENANCE

Organic signal support units support the TSC(A)'s organic C-E/communications security (COMSEC) equipment. They provide DS and GS maintenance support to operating sites and mobile maintenance support teams to extend off-site maintenance support capabilities forward to operating sites. The COMSEC logistics support facilities accomplish COMSEC maintenance beyond the capability of the area maintenance and supply facilities (AMSFS).

Maintenance support to chemical units presents a considerable challenge to the logistics planner. Low-density and unique equipment increase this challenge. NBC reconnaissance units equipped with the M93 NBCRS (FOX) and the MM1 (mass spectrometer) present additional maintenance considerations. In the theater of operations, the M93, MM1, the protective mask, the validation system (M41), and the Biological Identification Detection System (BIDS) are contractor supported.

AVIATION MAINTENANCE

The aircraft maintenance system uses a three-level concept: aviation unit maintenance (AVUM), aviation intermediate maintenance (AVIM), and depot maintenance. Each aviation unit is responsible for performing AVUM on its assigned aircraft, including organizational-

level aircraft system and subsystem maintenance and servicing, combat emergency temporary battle damage assessment and repair (BDAR), and aircraft recovery and evacuation.

Divisional and nondivisional AVIM units provide a one-stop or intermediate level of maintenance between the operating units (AVUM) and depot. Nondivisional AVIM units are employed on an area basis and assigned to the appropriate (tactical or operational) level CSS organization. AVIM units are tailored to support specific aviation organizations, normally those assigned to a specific aviation brigade or group. Because AVIM units are tailored to support the mix of aircraft in an aviation brigade, they mirror the changes in the aircraft density/type that occur within the theater over time. An AVIM unit designed to support a specific aviation brigade cannot be employed to support a different aviation brigade without risk of serious disconnects in manpower and equipment. Current aircraft fielding plans for the air assault division, corps aviation brigade, and operational-level aviation structure have sufficient aircraft densities to require support from an AVIM battalion. An AVIM company supports other divisions and unique aviation requirements. AVIM units are responsible for—

- Specific repairs on aircraft systems and subsystems for return to user.
- Repair of certain assemblies, components, and parts for return to stock.
- Quick-response maintenance support, technical assistance through the use of mobile maintenance support teams, and backup AVUM, BDAR, and aircraft recovery and evacuation.

An aviation assistance team or an aviation classification and repair activity depot (AVCRAD) may provide the maintenance support above AVIM in theater. The AVCRAD provides selected depot-level support and backup AVIM within the theater. Should operational-level activities require Army aviation support, an operational-level AVIM organization will be assigned; however, the operational mission may be inconsistent with the mission for which the AVIM was specifically designed. When appropriate, alternatives may include assigning the mission to the LSE AVCRAD, contracting with commercial maintenance facilities, or making cross-service arrangements.

As with ground equipment structures, aircraft depots perform major and overhaul type maintenance on end items and components for return to the supply system. Refer to FM 1-500 for additional aviation maintenance information.

MARINE MAINTENANCE

A marine maintenance capability may be required to support deployed watercraft. This capability must be located afloat or at water's edge. A DS maintenance capability for all watercraft is integrated into organic unit maintenance, with exception of the hovercraft units, which have organic DS/GS capability. Floating craft maintenance elements of the transportation group provide GS maintenance to all other Army watercraft. The owning unit will normally recover watercraft. Evacuation will be by specialized watercraft, such as the large tug. Depot-level maintenance may be obtained through the LSE.

RAIL MAINTENANCE

The Army's rail maintenance capability is limited. Therefore, rail units will perform limited maintenance and repair of track, bridges, buildings, and structures of a railway area. Railway equipment maintenance companies will inspect, providing servicing and running repairs to diesel-electric locomotives and rolling stock. The HN, under MOU or MOA, or a commercial contractor will provide rail assets, recovery, evacuation, and major repairs.

AIRDROP EQUIPMENT MAINTENANCE

An airdrop equipment repair and supply company, located in the airborne corps and at the operational level of CSS, performs airdrop equipment maintenance—technically classified as a field service. In the airborne corps, this unit provides GS supply support and DS/GS maintenance support of airdrop equipment—such as personnel parachutes, cargo parachutes, suspension slings, and airdrop platforms—in support of the multiple

airdrop support units organic to the airborne corps—such as the airborne division airdrop equipment support (AES) company, the airborne corps AES company, and the light airdrop supply company. At the operational level, this company provides similar support to the operational-level heavy airdrop supply company and to the light airdrop supply company in each corps (other than the airborne). This company responds to the appropriate level MMC for both supply and maintenance. Additional information on airdrop equipment maintenance is in FMs 10-1 and 10-500-1.

INTELLIGENCE AND ELECTRONIC WARFARE (IEW) MAINTENANCE

Military intelligence (MI) units are equipped with low-density and classified intelligence collection, processing, and dissemination systems requiring specialized maintenance and components. The sustainment challenge is to employ logistics (maintenance) to support subordinate units that are widely dispersed forward in the main battle area but are not attached to the maneuver unit in whose area they are operating.

Currently, maintenance of IEW equipment is performed within the four-tiered system: unit, DS, GS, and depot. However, due to the transformation from a forward deployed to a force projection Army, MI is moving toward the two-tiered field and sustainment system with the rest of the Army. Unit and direct support are under the field tier; the sustainment tier includes GS and higher. The goal is rapid repair as far forward as tactically feasible. Due to low-density and different generations of IEW equipment in the field, the transition from four to two tiers will not occur at the same rate for each type of equipment.

The MI commander is responsible for both unit and DS-level maintenance of IEW systems/equipment, GS and depot-level maintenance organizations perform maintenance and repair of these systems/ equipment that exceeds the capability of the MI commander's organic assets. In keeping with the concept of forward support, unit maintenance teams attempt to repair IEW equipment as far forward as possible to reduce the time required to return the equipment to the mission.

GS-level maintenance is accomplished off site at semi-fixed and fixed facilities. At this level, maintenance soldiers repair defective circuit card assemblies and modules, Battle-damaged boxes (end items) may also be repaired if repair cannot be accomplished at lower level maintenance. The decision to repair the component, return it to the depot, or categorize it as uneconomic to repair depends on cost analysis. Depot-level maintenance is performed at fixed facilities and supports the supply system. While normally production oriented, the LSE provides the flexibility and capability to project forward depot repair and below.

IEW logistics planners must contend with the following challenges that are in some ways peculiar to IEW equipment:

- Beyond the year 2010, MI will conduct operations utilizing equipment that covers three generations of technology. The IEW logistics manager must be able to support all of these equipment variants as they exist in the inventory. Failing this, certain items must be identified as nonsupportable and removed from the inventory so that scarce resources will not be diverted to nonproductive ends.
- Combined with low-density equipment, the per-unit cost of most repair parts and components for IEW equipment is higher than for normal Army items purchased in greater numbers, regardless of complexity. This lends urgency to the requirement to intensively manage both end items and support packages from the strategic to the tactical level of logistics.
- For some systems, technical competence to repair/replace may only exist at the original equipment manufacturer (OEM) level. As the technological levels attained are continually rising, more and more IEW equipment will be nonreparable or even nondiagnosable at the unit or perhaps anywhere below the OEM level. This will lead to disposing of equipment without repair or direct exchange with the manufacturer.

AUTOMATION MAINTENANCE

Automation is a critical factor in providing logistical support to ARFORs. Sustainment operations addressing supply, maintenance, and transportation rely extensively on a series of microcomputers and minicomputers and associated software. Medical automation maintenance management is discussed in Chapter 7.

At the operational level, the corps/theater automatic data processing (ADP) service center - phase II (CTASC-11) is allocated to the appropriate level MMC and movement control agency (MCA) to support logistics operations. In these and other units, such microcomputers as the personnel computer—commercial off-the-shelf (PC-COTS) provides support of logistics systems. At unit level, for example, the motor pool commercial hardware is focused to support unit-level logistical functions. CTASC-11, the Tactical Army CSS Computer System (TACCS), and commercial hardware provide the bulk of automation support.

The CSS automation management offices (AMOS) located in the senior CSS organizations provide support for the software systems operating on the microcomputer. They coordinate the installation and synchronization of the standard Army management information systems (STAMIS), along with assisting units with CBS automation planning.

Military or contractor personnel perform on-site DS/GS maintenance on computer hardware or it is evacuated to a DS maintenance facility. Civilian contractors provide most of the maintenance support.

TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT (TMDE) MAINTENANCE

During the transition phase, USAMC provides theater TMDE maintenance and calibration support, which is controlled through the LSE. Operational control of the in-theater TMDE calibration and repair support capability may pass to the ARFOR commander. Command of TMDE support activities remains with USAMC. This service provides for one-step calibration and repair of general-purpose TMDE and calibration of selected special-purpose TMDE to ensure the proper degree of materiel readiness. Refer to AR 750-43 for more information.

Mobile TMDE support teams are attached to deployed corps elements. Additional teams deploy with operational-level maintenance units as required. The maintenance company provides calibration and repair support to TMDE on a mission-critical/priority basis.

FIELD SERVICES

Quartermaster specialists serving in a variety of units in forward and rear areas provide field services that cover many varied services and functions. Military personnel provide the preponderance of field services at the tactical level, with HNS or contractors providing only a very limited amount. Conversely, at the operational level, HNS or contractors provide a great deal of field service support. In the past, bakery and salvage were classified as field services. This is no longer the case since field bakeries will no longer be in the force. Bakery products will be issued through the supply system (pouch bread) provided by HNS or civilian contract, and field feeding equipment can produce a very limited quantity of baked goods. Salvage is simply a function of supply and will be discussed in the appropriate supply publications. Field feeding and water purification have been recently added as field service functions.

Field services are required for health, sanitation, welfare, and morale of the force. In the past, field services were divided into primary and secondary classifications. This is no longer the case. Instead, the decision as to which of the field services is more critical is left to the ASCC in the theater. The ASCC influences priorities through the Total Army analysis process and through the time-phased force deployment list. Field services consist of field feeding; mortuary affairs; airdrop—including parachute packing, air item maintenance, and airdrop rigging for both

initial insertion and resupply operations; laundry, shower, and clothing and light textile repair; water purification; and Force Provider.

FIELD FEEDING

Unit commanders are ultimately responsible for the overall field feeding operation. The three main elements in the Army field feeding system (AFFS) are the feeding standard, rations, and the area feeding concept.

The Feeding Standard

The AFFS feeding standard is that soldiers will be fed three quality meals daily, to include one A/B meal per day, depending on METT-T. Deploying units will initially consume MREs. As quickly as practical, the standard will change to allow soldiers to consume a variety of group feeding rations.

Rations

Rations are packaged as individual meals or group meals. The MRE is the general individual ration. It is supplemented with the individual ration heating device. It may also be heated by using the new mounted water/ration heater for vehicles. Group meals (A-, B-, and heat-and-serve rations) are best used when units are located in more stable or uncontested regions. Bread or bread-like components are essential components of AFFS. When using the MRE, pouch bread will be the primary source. It will always be the initial bread source in the theater of operations. As tactical and logistical situations permit, HNS or commercial vendors (contracted) may provide fresh bread.

Area Feeding

Feeding schedules are based on established operations orders and timelines established by the commander. When units are operating in an area with no food service capabilities, they will either subsist on MREs or be serviced by other units in the area. Before the latter will occur, careful coordination must ensure that adequate rations are available through the supply system.

MORTUARY AFFAIRS

The American public expects, as a tenet of faith, that the Army will take proper care of deceased personnel. The Mortuary Affairs Program is a broadly based program used by the military services to provide the expected level of care for deceased personnel. The unified commander develops implementation plans based on joint staff policy, the force structure, and doctrine.

The Mortuary Affairs Program consists of three subprograms: the current death, graves registration, and concurrent return subprograms. The current death subprogram provides full mortuary services for permanent disposition of remains and personal effects. It operates around the world in peacetime. It may continue in areas of conflict depending on the logistical and tactical situations. The graves registration subprogram provides for search, recovery, initial identification, and evacuation of remains for temporary interment. The concurrent return subprogram provides for search, recovery, and evacuation of remains to a mortuary. It provides for the positive identification, embalming, and disposition of remains as directed by the next of kin. The CINC decides which of these subprograms will be used. Figure 4-9 depicts the three subprograms. Regardless of the subprogram in effect, remains are evacuated through a series of collection points located throughout the theater. If no temporary cemeteries or mortuaries are located in the theater, all remains will be processed through the theater mortuary evacuation point for evacuation to a CONUS port-of-entry mortuary. FMs 10-1, 10-63, and 10-63-1 contain additional information on mortuary affairs.

AIRDROP

The three types of specialized airdrop support units/companies that provide this field service are:

- Airdrop equipment support companies—airborne division and airborne corps.
- Airdrop supply companies—a light company at the corps tactical level; a heavy company at the operational level.
- Airdrop equipment repair and supply companies—one in the airborne corps and one or more at the operational level of CSS.

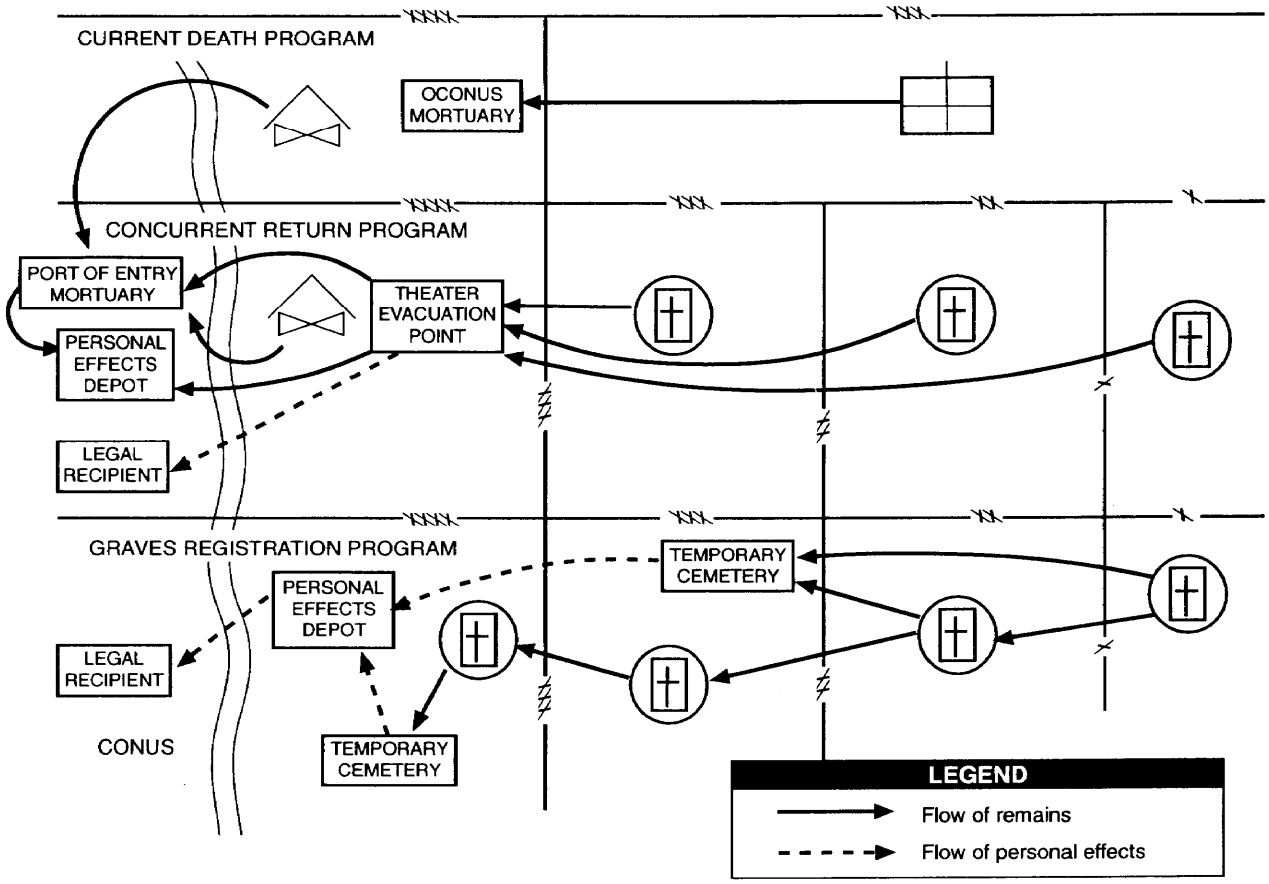


Figure 4-9. Wartime Concept of Operations for Mortuary Affairs in the Theater

Airdrop equipment support companies provide support to an airborne insertion. This entails packing parachutes (personnel/cargo), rigging loads for airdrop, and performing organizational maintenance on the unit's airdrop equipment. Airdrop supply companies provide airdrop resupply support to the force, primarily to combat units engaged in the vicinity of the FLOT. Airdrop equipment repair and supply companies provide DS/GS supply and maintenance support in support of other airdrop support units. Airdrop responsibilities at the operational level are to provide backup airdrop resupply support and airdrop equipment supply and maintenance support to tactical-level airdrop units.

LAUNDRY, SHOWER, CLOTHING, AND LIGHT TEXTILE REPAIR

The need to provide the soldier with clean, serviceable clothing and a shower has long been recognized as essential for hygiene and morale purposes. This field service will be provided at the tactical and operational levels of CSS. The standard is to provide at a minimum a weekly shower to each soldier and, also on a weekly basis, to launder, make minor repairs, and return his own individual clothing to him within a 24-hour period. The weekly shower is even more important if individuals have had to wear NBC defense clothing for any length of time. This field service will be provided only in the DS mode. At the tactical level this support will be provided almost exclusively by field service units; at the operational level, by a mixture of field service units, HNS, and civilian contract. If a laundry and renovation GS capability is required, it must be provided from HNS or civilian contract. More information on laundry and shower support is in FM 10-280.

WATER PURIFICATION

Water purification capabilities are found at both the DS and GS levels. When the need for water for decontamination is critical,

reprioritizing it from such sources as laundry and bath may become necessary in order to temporarily meet needs. Purified water enters the GS water distribution system from onshore or offshore purification points. GS water purification teams and detachments operate these purification points using reverse osmosis water purification units (ROWPU). Purified water is stored in collapsible fabric tanks at a base terminal storage facility. It is distributed to other terminals in the operational level and to the tactical level by the Tactical Water Distribution System (TWDS) or semitrailer-mounted fabric tanks (SMFT). The water assets at the operational level come under the C^2 of the petroleum group; at the tactical level they come under the corps support command (COSCOM). When the GS water system is implemented, both corps and division require augmentation with additional storage and distribution capability. Additional information on water purification is discussed under water supply earlier in this chapter and in FM 10-1, FM 10-52, and FM 10-52-1.

FORCE PROVIDER

Force Provider (see Figure **4-10)** is an air-transportable, modular collective support system that provides creature comforts rarely

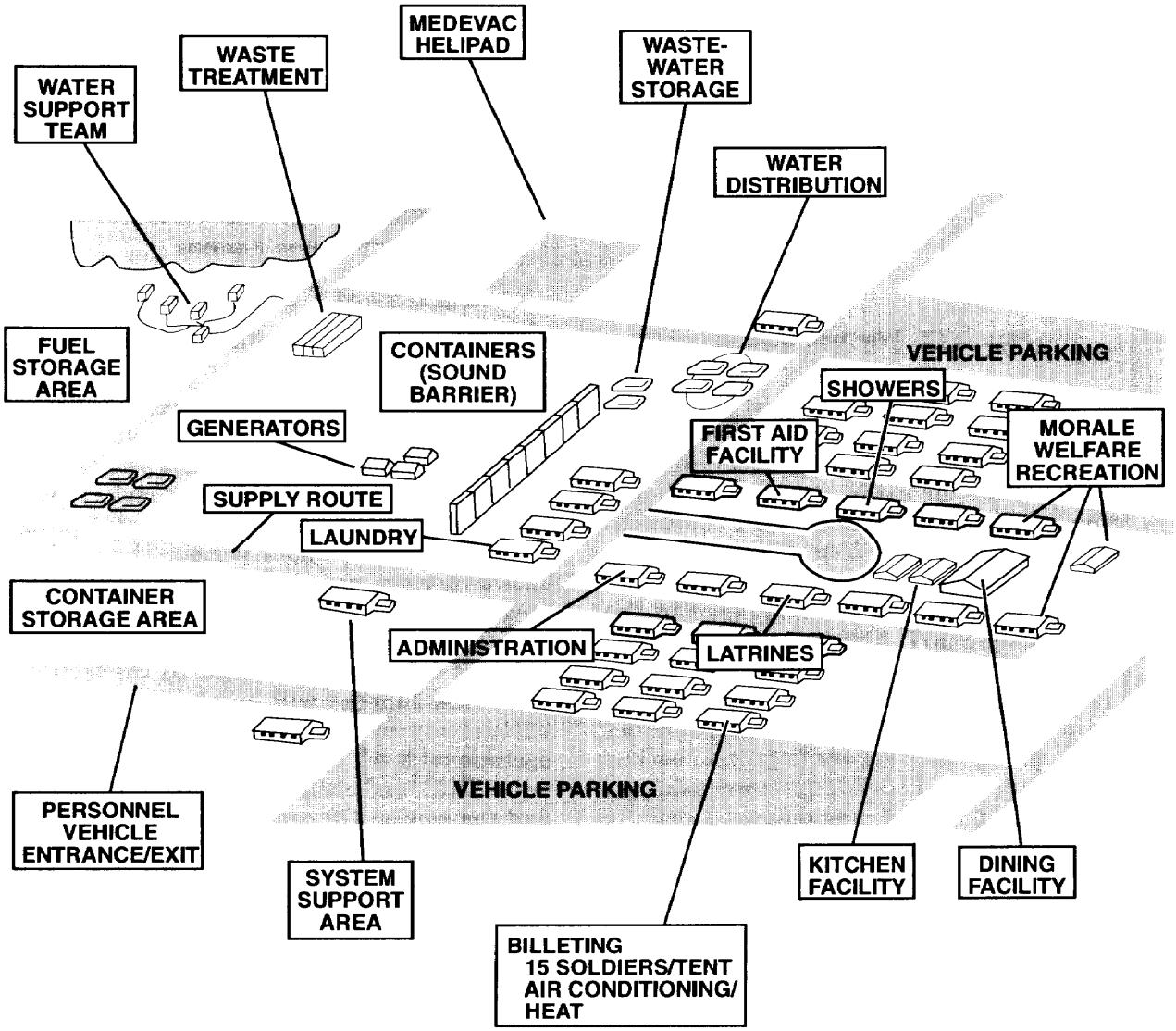


Figure 4-10. Force Provider

enjoyed by Army combat soldiers. It is containerized for easy air-land-sea transport, modular for operating in various tactical environments, mobile to follow troop movements, and offers a variety of services to improve soldier quality of life. Troop units can be rotated into Force Provider rest and refit, including hot meals and showers, laundry service, environmentally controlled tents, and a variety of morale, welfare and recreation activities. This concept supports a myriad of mission profiles, including soldier rest and refit, convoy support, theater reception, and intermediate staging base operations. Force Provider can also be used to support humanitarian aid and disaster relief missions and peacekeeping operations.

Individual Force Provider modules supporting up to 550 soldiers can be combined to support brigade-size forces up to 3300 soldiers. Operated by a quartermaster Force Provider company, it includes organic power generation, water/waste distribution systems, and fuel storage. External transportation and water and engineer support are required to set up and operate Force Provider, which uses modern air-conditioned Army TEMPERs as its basic building block.

RECOVERY AND EVACUATION

The first step in the recovery process is battle damage assessment (BDA) and repair. Damaged equipment that cannot be repaired in the combat zone will be evacuated to an echelon capable of repairing it within an acceptable time frame. Serviceable and unserviceable equipment not required in the CZ will be evacuated to the collection and classification (CC) company or cell of a senior CSS organization. Recovery within the operational area will be to the most secure site where repairs can be made and items returned to service.

During operations in an NBC environment, materiel is decontaminated to the extent required to minimize exposure and provide timely recovery and evacuation. Equipment is identified and clearly marked as to the type, extent, and date of contamination.

CC personnel will report the damaged equipment to a commodity manager in the senior CSS organization MMC, which will accept accountability and provide instructions to the CC to ship items to the DRMO, a cannibalization point, or CONUS.

ARMY OIL ANALYSIS PROGRAM

The objectives of the Army Oil Analysis Program (AOAP) are to improve operational readiness of equipment, promote safety, detect potential failures, and conserve petroleum resources by using *on-condition* oil changes. The program objectives and policies are outlined in AR 750-1.

CONTRACTING

US forces are deployed on a contingency basis throughout the world in support of vital national interests. These contingency operations involve military and other public or allied elements. The G4/S4 determines whether to fill a supply or service requirement by using the military supply system, HNS, the LOGCAP, or contracting. Contracting can be an essential tool in support of these missions.

Properly used, contracting is an effective CSS force multiplier for deployed forces. It can increase existing CSS capability and provide a new source for critically required supplies and services. Contracting for supplies and services can improve response time during the critical early stage of a deployment, freeing airlift and sealift for other priority needs. It can fulfill all of the following requirements that US forces would otherwise fill:

- Supplies: Class I, II, III, IV, IX (limited), and water.
- Services: Labor, mortuary (within specific parameters), laundry, shower, water purification, dining facility sanitation, and port operations.

- Other: Billeting, transportation, copying, maintenance and repair, equipment leasing, access to communication networks, temporary real property leasing, and limited minor construction.

Close cooperation and coordination with finance, CA elements, and the USACE are essential.

The operational situation determines when contracting personnel will deploy. In most contingency scenarios, an advance element of contracting personnel—along with supporting finance, resource management, and legal personnel—should precede the arrival of the main body of contracting elements. These elements—part of the various CSS headquarters involved in the operation—will be composed of warranted contracting officers and contracting support personnel. The contracting element at each command level derives its contractual authority from the Assistant Secretary of the Army (Research, Development, and Acquisition) through the head of contracting activity (HCA)—typically the MACOM commander. Ordering officers, although not a part of the contracting element, can purchase specific supplies or services within limits specified by the ordering officer appointing authority or by regulatory guidance. Finance units, while working closely with the contracting element, will be independent. The headquarters fielding the contracting element or the next higher headquarters containing a staff judge advocate (SJA) office will provide legal support.

JOINT OPERATIONS

Recently, Army forces have deployed as part of joint operations supporting contingencies in immature theaters. The trend of world events suggests such operations will reoccur, requiring the creation of joint contracting elements staffed by personnel from all services operating in the theater. A joint contracting office will normally be established by the theater or, if less than a theater, the highest level organization deployed. The Army portion of the joint office may include some or all warranted Army contracting officers in the theater. If separate services maintain parallel contracting organizations, cooperation and coordination among the service elements are essential to preclude interservice competition for local supplies or services, to obtain more advantageous prices through consolidation of requirements, and to more effectively utilize scarce personnel resources.

PREDEPLOYMENT PLANNING

Prior to deployment, contracting organizations at all levels should establish a contracting support plan (CSP) and maintain contracting support kits. Unplanned deployments do not preclude planning for their support. Planning helps perfect the mechanisms and organization required to accomplish support with a minimum of time or effort.

Contracting Support Plans

The CSP is the mechanism for planning. It begins at the unified or specified command and is incorporated in each successive lower level of command. Through the CSP, the MACOM/ASCC assures that contracting plans and procedures are implemented, reviewed, and carried out. The CSS unit commander approves the plan, which assures that HNS and LOGCAP resources are fully utilized and that contracting solutions are considered in CSS planning for contingency deployments. Each MACOM/ASCC should assure that senior subordinate commands have a CSP to cover probable deployments of supported forces. Forces with requirements that may be met with HNS, LOGCAP, or contracting support must be made aware of the CSP and help the supporting contracting element develop procedures and plans to cover various contingencies. The supporting element provides copies of approved CSPs to supported activities, units, and functions. As a rule, the plan should include/address:

- Security and quality control aspects of contracting, including inspection of goods received to insure against sabotage, poisoning, and other terrorist-style actions.
- Planning for contract requirements established by the unit (or units) supported under various contingences.
- Designating, deploying, and augmenting contracting elements and finance units.

- Contracting procedures, authorities, and deviations during various contingencies.
- Developing, maintaining, and using contracting support kits tailored for as many deployment locations and situations as possible.
- Operating procedures and responsibilities of contracting officers, ordering officers, contracting officer representatives, finance and accounting officers, and required activities during various contingencies.
- Participating in site surveys and exercises and conducting contingency contracting training.
- Ensuring that contracting and finance support are included in contingency OPLANS.

Contracting Support Kits

Each contracting element will set up and maintain contracting support kits containing enough required forms, general supplies, and equipment to support a contracting officer for a predetermined time at a remote deployment location. In addition, separate data bases for as many potential deployment locations as possible may be developed. Both the basic kit and the data base for the specific deployment area will be taken with the contracting team. Data bases may include area studies, locally developed CSS support data, and recommendations from State Department foreign service personnel. Information also comes from US civilians or others familiar with the area. A thorough knowledge of existing LOGCAP and HNS agreements available in the area of operation is also necessary. Contracting element personnel must continually update this information. Help from supporting finance and CA units should be obtained.

TRAINING

Unit contracting officers may work in the directorate of contracting (DOC) at their installations to maintain qualifications as contracting officers and proficiency in contracting laws and procedures. In order to remain responsive to their units' requirements and procedures, they should participate in field exercises and training with their parent unit, including operational and CSS planning and execution. They also will cooperate with G4 and other staff elements to assure coordinated preparedness for deployment. Additional information on contracting for the Army in the field is in the Army Federal Acquisition Regulation Supplement Manual No. 2.

FORCE RECEPTION AND ONWARD MOVEMENT AND SUSTAINMENT

Operational-1evel CSS commanders, support elements, and advance parties for incoming units must ensure that augmentation forces are rapidly equipped and deployed to designated marshaling areas. The ASCC is responsible for receiving, equipping, and helping deploying units achieve an operational readiness posture.

As designated by the ASCC, elements of the senior CSS organization will provide supply, maintenance, and life support. The senior MCA will coordinate Army transportation and HN lift capabilities and movement assistance. The ASCC assumes operational command of all deploying US Army forces as they arrive at theater PODS. The AR FOR commander designates specific elements to provide the following CSS support and services for each arriving ARFOR:

- Reception services at the POD. The unit advance party will coordinate requirements for reception services and designate activities to perform them with the ARFOR organization staff prior to arrival of the main body.
- Essential supplies and services until the unit achieves a normal operational posture.
- Supply support, including Classes I, II, III, IV, V, VIII, and IX relative to those units drawing pre-positioned supplies and equipment.
- Emergency medical, dental, and veterinary services.

- Maps.
- Reinforcing DS maintenance, recovery, and evacuation services.
- Troop facilities within existing resources.
- A single point of contact—marshaling area control group commander—for deploying units.
- Limited communications services—radio, teletype, and FM radio--at each designated marshaling area site.
- Appropriate tie-down materials for securing loads on modes of transportation for onward movement.
- Essential administrative services until the unit achieves normal operational status.
- Coordination of all HNS services.
- Programmed and coordinated transportation support, movement instructions, and movement assistance.
- Replacements for units arriving in theater with critical personnel shortages.

When the ARFOR commander determines that deploying forces are fully operational, he submits a readiness report to the ASCC. The ARFOR commander issues movement orders or other guidance for support along the LOC. The ASCC continuously monitors ARFOR arrivals into the theater through the reception and equipping phase and as they move to their designated staging and operational areas.

Chapter 5

Transportation

Effective transportation requires a balanced and integrated system of movements control, modal operations, and terminal operations. The system is divided into intertheater and intratheater aspects, but connectivity between the two is imperative. The transportation system connecting one theater to another is a combination of US military and commercial transportation, HN military and civilian carriers, and/or, in special cases, non-US flag carriers. It must be capable of transporting military forces to overseas destinations in accordance with existing plans. USTRANSCOM is a unified command that manages and provides strategic common-user airlift, sealift, terminal services, and US commercial air, sea, and land transportation for US forces worldwide.

PLANNING

Transportation planning consists of determining what must be moved, where and when it must be moved, and the best way to move it. Planning in support of a unified commander's operations plan covers both strategic-level and in-theater movement and reception of personnel, materiel, and equipment into the theater and onward movement to their final destinations. Planners must assess competing requirements for mobility support facilities and theater transportation assets in terms of their impact on mission accomplishment. The commander's priorities must be clearly articulated and translated to all transportation efforts.

The payoff in transportation planning lies in the timely delivery to planned destinations of both effective combat forces and the means for their sustained support. Transportation planners must recommend methods of prioritizing in-bound shipments, which may involve providing liaison to the PO ES, to CCPs, or to other activities. Receiving activities must be capable of receiving in-bound shipments. Shipments must be monitored en route to assure timely delivery and advance warnings of bottlenecks. Transportation bottlenecks at CONUS activities directly impact theater support. A shortfall in any element reduces the capability of the entire system. When bottlenecks occur, the operational MC element must rapidly identify and prioritize them to increase the system's effectiveness.

MOVEMENTS PROGRAM

A movements program is used to preplan both known and anticipated transportation requirements for reception and onward movement and sustainment. Movement planners allocate available transportation resources to support requirements based on the commander's priorities. The program supports these priorities by establishing which requirements can be resourced given available CSS assets, units, and infrastructure. A forecast of programmed movements, the program serves as the authority by which units or shipping activities initiate actions to obtain transportation. It authorizes movement control teams (MCTs) to issue movement releases, directs the mode operators to furnish assets, and alerts receiving agencies to accept programmed shipments.

METT-T, the ability of supply and personnel agencies to forecast their requirements, and the ability of transport operators to forecast their capabilities govern

the time covered in the program. MCTs use the program as authority to commit mode operators, and the mode operators use the program as a basis for furnishing transportation. Coordinated with all interested agencies before approval, the program is designed to keep movements organizations, mode operators, supply managers, and other agencies abreast of the evolving pattern of logistical activity.

STRATEGIC-LEVEL TRANSPORTATION

Strategic-level transportation involves CONUS inland transportation, movement through POEs, and strategic sea or air movement to the PODs in the theater base or COMMZ. USTRANSCOM and its components use both commercial and military transport resources to carry out strategic-level transportation. MTMC plans and routes CONUS surface movements and movements through CONUS water terminals in conjunction with the servicing installation transportation office (ITO), traffic management office (TMO), or US Property and Fiscal Office (USPFO).

During the initial execution of the deployment, air deployment of high-priority units is the primary emphasis of strategic-level transportation. Air Mobility Command will air-deploy these units using primarily military and Civil Reserve Air Fleet (CRAF) aircraft. USTRANSCOM schedules deployment based on the theater commander's priorities in coordination with its components and the supporting commands providing forces. Strategic airlift capabilities will also be employed to deliver mission-essential supplies and equipment from CONUS as pre-rigged stocks or AWRPS. Simultaneously, the MTMC and the Military Sealift Command (MSC) concentrate on moving other high-priority units and supplies with surge sealift capability— including pre-positioned afloat— and on establishing the SLOCs. The SLOCs will be the sustaining strategic-level transportation system for the movement of supplies, equipment, and follow-on unit deployments.

THEATER TRANSPORTATION

Theater transportation occurs wholly within the theater. It consists of movement control, modal operations, and terminal operations, which work together to provide transportation support to the theater, to carry out linkages to strategic transportation, to perform operational tasks, and to support reception and onward movement. Included may be support to other service components of a joint operation or other participating nations and the integration of HNS.

MOVEMENT CONTROL

MC is the planning, routing, scheduling, controlling, coordinating, and ITV of personnel, units, equipment, and supplies moving over LOG and the commitment of allocated transportation assets according to command priorities. It involves synchronizing and integrating CSS, movement information, and programs that span the strategic, operational, and tactical levels of war. MC is guided by a system that balances requirements against capabilities and assigns resources based on commander's priorities. Within the COMMZ, one of the primary missions of movement control units is to support the reception, onward movement, and redeployment of forces arriving in and departing the theater. See Figure 5-1 for deployment stages.

For units and non-unit-related personnel and equipment, deployment includes reception at the PODs and onward movement to the area where forces will either be assembled or committed. During redeployment, it includes coordinating movement to POEs. MC is a component of movement synchronization, which includes maneuver and battlefield circulation control. Maneuver directs the tactical displacement of units supported by fire to achieve a position of advantage over the enemy. Competing demands for common routes

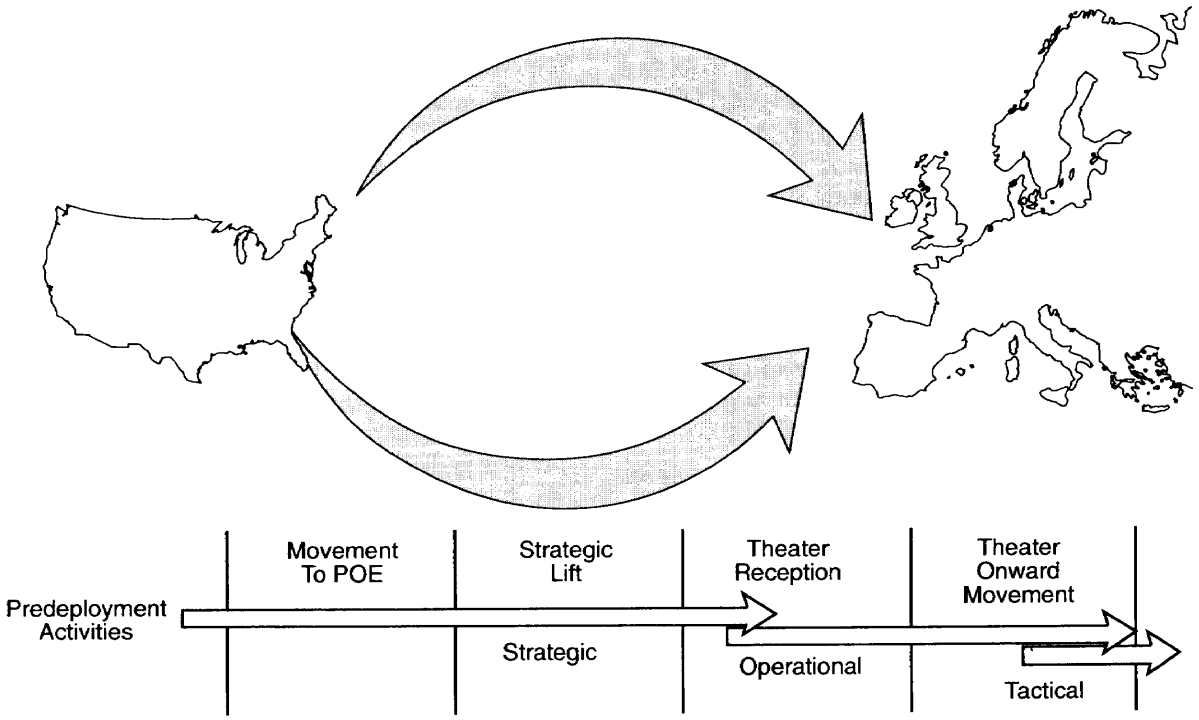


Figure 5-1. Stages of Deployment

for movement and maneuver must be carefully synchronized between movement control and operations staffs at each echelon. Battlefield circulation control is a major MP mission, which supports movement control and maneuver by providing route reconnaissance and traffic control to enforce highway regulation and operations plans.

Joint Movement

Within a theater of operation, US forces are normally employed under a joint or multinational command. The CINC organizes the command to meet the needs of the theater of war. He exercises directive authority for logistics to maintain effectiveness and economy of operation and to prevent or eliminate unnecessary duplication of facilities and resources. In exercising directive authority for transportation services, the CINC may delegate the operation of theater-controlled common-user transportation and terminal functions to a service component, while retaining the authority to set priorities, appropriate resources, and monitor the entire operation. He may also allow component commanders to plan for and perform their own movement control or create fully integrated joint organizations such as a joint movement center (JMC) or a joint transportation board (JTB). The JTB, usually made up of representatives of the service components, interprets policies and resolves overlapping transportation priorities for the JFC. The JMC coordinates strategic movements with USTRANSCOM and oversees execution of theater transportation priorities. It plans future operations and monitors overall theater transportation performance. The JMC is normally organized along functional lines and is the nucleus of an organization that can be expanded in proportion to the size of a joint force. Its major responsibilities include—

- Planning common-user theater transportation by land, sea, and air by developing a movement plan that supports the CINC's priorities.
- Apportioning the command's common-user transportation capability among the projected transportation tasks.
- Forecasting long-term movement requirements to the Defense Transportation System (DTS) by analyzing requirements, capabilities, shortfalls, alternatives, and enhancements; developing options; and recommending courses of action.

- Receiving and acting on authorized component validators' airlift requests by monitoring aerial ports' airlift performance and operations, reviewing and validating airlift channels, monitoring air deployment of major forces, and effecting changes to movement requirements and priorities in the Joint Operations Planning and Execution System (JOPES).
- Monitoring sea deployment of forces and recommending changes to movement requirements and priorities in JOPES.
- Deconflicting transportation requirements that cannot be met at lower levels in the movement control system by monitoring movement of forces during deployment; monitoring port clearance, rail, highway, and waterway activities; maintaining and disseminating military route information; developing plans for maintaining road networks; and coordinating with engineers and HNS.

Normally, the Army will be tasked to control movements on inland LOC. In a multinational theater of operations, the multinational commander may also exercise authority to apportion theater transportation capability among multinational commands. He may establish a multinational transportation movement control agency with representatives of each nation to perform movement control based on the mission and the magnitude of the transportation tasks required.

Army Movement Control

At the operational level, centralized movement control is imperative to accomplish reception and onward movement. It is vital for sustaining Army forces, along with supporting any joint service requirement.

An operational-level movement control organization assigned to the senior Army headquarters within the area of operations performs movement control functions. It could be a theater army movement control agency (TAMCA) assigned to an ASCC headquarters or an augmented corps movement control center (MCC) assigned to a corps. The senior movement control organization's mission is to provide movement management services and highway traffic regulation to coordinate personnel and materiel movements into, within, and out of the theater. It coordinates with allied nations, HNs, sister-service movement control organizations, and USTRANSCOM or its components as required. MC organizations can be deployed to meet the specific movement control requirements of the theater.

The senior MC organization, through the JMC, maintains close functional relationships with strategic transportation activities such as USTRANSCOM and CCPs. CONUS-based—primarily USTRANSCOM—activities provide the movement control organization advanced information on unit and nonunit movement and resupply strategic movements. The movement control organization can then make timely decisions to facilitate reception and onward movement. It must routinely coordinate with the MMC to integrate the movement of supplies into the distribution system and the theater movements program. This involves programming adequate highway, rail, water, or air transportation to meet movement requirements according to command priorities. This coordination ensures close integration of supply, maintenance, personnel, and transportation support. The senior MC organization also coordinates with MTMC and JMC/JTB. See Figure 5-2.

Although the MC organization does not command any transportation modal operating units, it does allocate their capabilities and control the transportation effort. The senior movements control organization in theater is charged with implementing five principles of movement: centralize control/decentralize execution, regulate movements, make movement fluid and flexible, make maximum use of carrying capacity, and provide forward support.

***Centralized Control/Decentralized* Execution.** Movement control will be centralized at the highest level charged with providing logistical support and monitoring the transportation system and infrastructure, This requires a focal point for transportation movement planning and resource allocation at all levels. Decentralized execution enhances flexibility to meet local requirements and to rapidly reprioritize support as required.

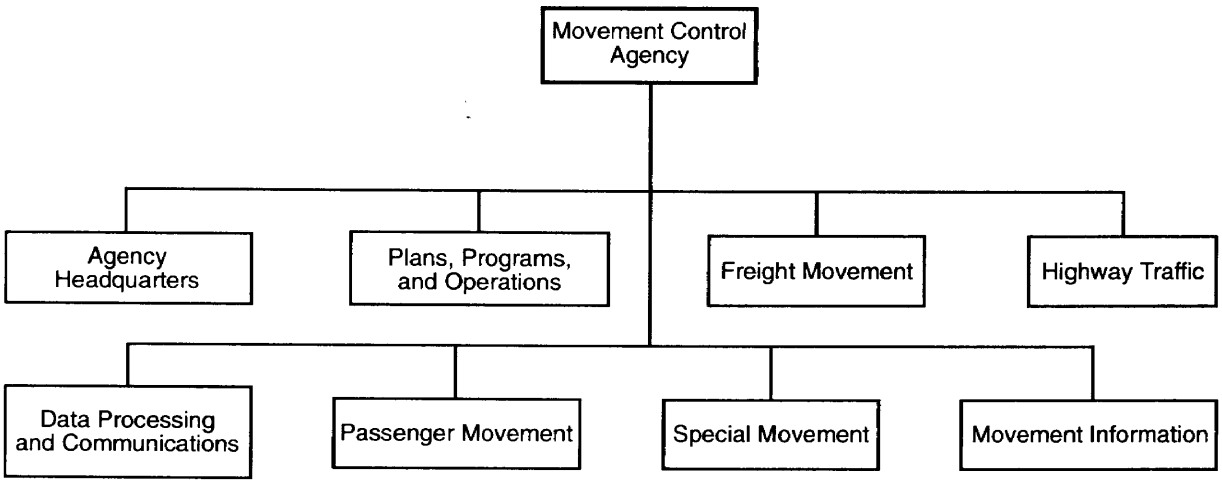


Figure 5-2. Notional Operational-Level Army MCA

Regulated Movement. Regulation of transportation assets and LOC is required to prevent congestion and conflicting movements. This is critical if US forces must share available airfields, roads, rail lines, water terminals, and inland waterways with allied forces and HNs. Movements must be regulated according to command priorities.

Fluid and Flexible Movement. The transportation system will provide uninterrupted flow of traffic. Movement planners must anticipate the need for alternate modes and routes,

Maximum Use of Carrying Capacity. This involves more than loading each transport vehicle to its maximum carrying capability. Unused capability cannot be stored to provide an increase in capability later. Similarly, fully loaded transport equipment sitting idle or being used for storage is as inefficient as moving partially loaded transport equipment. While allowing for adequate equipment maintenance and personnel rest, planners must keep transportation assets loaded and moving as much as the tactical situation permits.

Forward Support. Forward-oriented transportation support is a combat multiplier. It depends on fast, reliable transportation to move supplies and personnel as far forward as required. The senior movement control organization prepares movement plans and programs, conducts necessary liaison with higher and lower movement elements, supervises the activities of the subordinate movement control battalions and teams, and ensures proper use of available movement capabilities.

MC units will normally deploy in proportion to the total force size and level of transportation effort required. They deploy in echelons with their force. Therefore, a complete operational-level movement control organization, such as an MCA, will not be deployed during the early stages of deployment. Tactical-level MC units, such as corps movement control centers or teams, will perform initial movement control functions, As soon as feasible, an operational-level MC unit, such as a transportation battalion (MC), is deployed to relieve the tactical level from continuing to perform operational movement control and allow it to focus on the tactical level. This augmentation will provide interim operational-level MC functions while tactical-level movement control elements concentrate on the onward movement of the tactical organization. For additional details, refer to FM 55-10 and Joint Pub 4-01.3.

Movement Control Battalions and Teams

To decentralize execution of transportation management and MC functions, the COMMZ may be divided into transportation movement regions. The number of customers served, the number of modes and nodes, and the geographical size of the COMMZ determine the size of these regions. Transportation battalions (MC) provide C^2 of MC functions within the transportation movement regions.

Transportation battalions (MC) are responsible to the Army MCA for control and management of all movement matters in the theater transportation system that take place in their region.

Under the supervision of the transportation battalion (MC), MCTs function as field representatives of the senior movement control organization, directly interfacing and tasking the mode operators, shippers, and receivers. Figure 5-3 shows an example of a COMMZ with a sea and aerial port, MMC, theater storage area, and GS units with the senior MC organization and its attached MCTs.

Corps-Level Movement Control

The corps MCC provides centralized transportation management in the corps. It coordinates with the operational-level MC organization for additional assets and to determine the identification and capabilities of supply routes that cross the boundary between corps and operational levels. See Figure 5-4.

MODAL OPERATIONS

The senior transportation organization is the principal mode operating headquarters in the AO. It provides theaterwide transportation support through its subordinate motor, rail, watercraft, air, and terminal units and may also operate common-user ocean terminals if they are not operated by MTMC. It coordinates transportation service support matters with other US forces, ASCC subordinate commands, allied/coalition forces, and the HN. The senior transportation organization may be a transportation command (TRANSCOM) or a composite group, including motor battalions, railway operating battalions, and terminal battalions. The principal functions of these

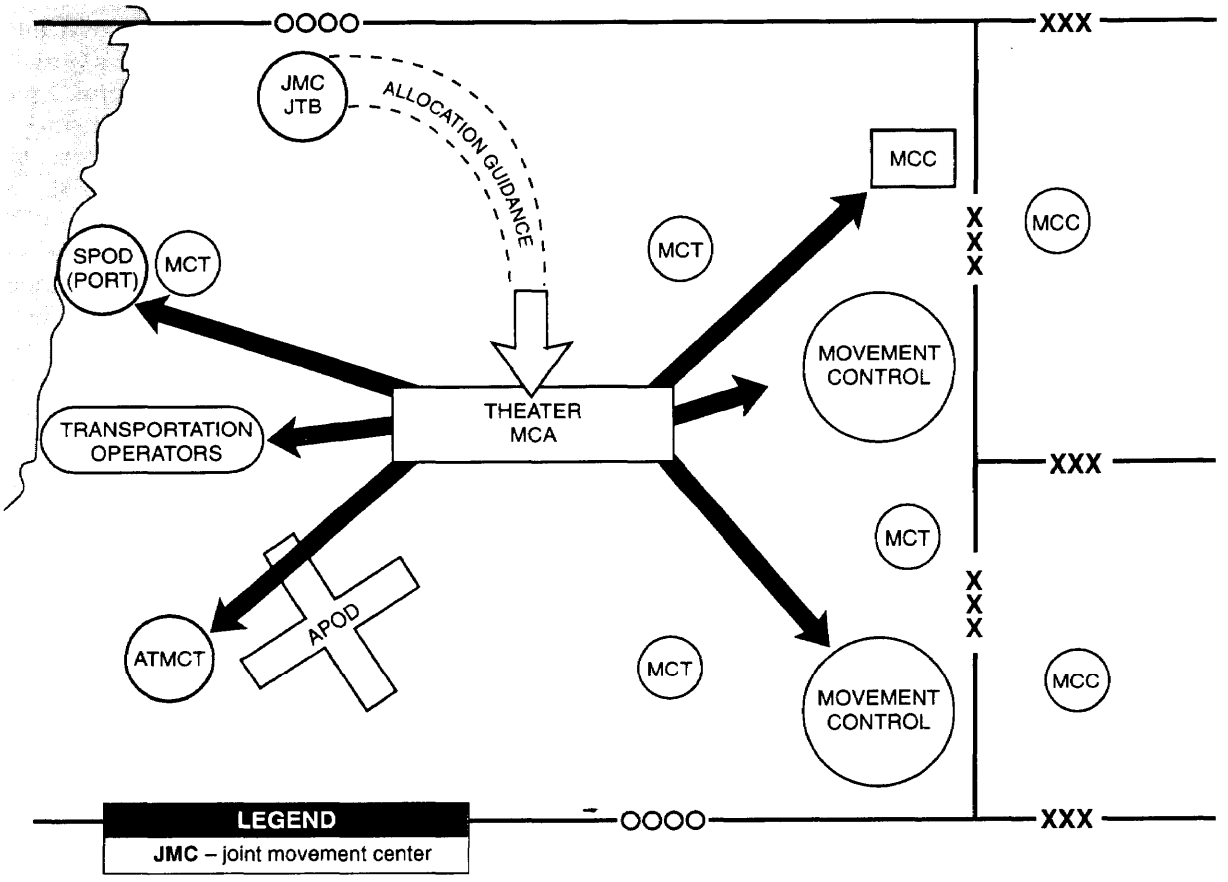


Figure 5-3. MC in a Theater Communication Zone

units, which provide common-user transportation services throughout the area of operations, include-

- Transportation support in the areas of highway transportation, cargo transfer operations, and terminal service operations.
- C^2 of assigned transportation units. FM 55-1 contains detailed information on modes of transport.

The senior transportation organization also provides staff assistance to the senior Army component organization for plans, policies, and procedures and controls transportation resources allocated to the Army transportation services. It controls all modes of Army transportation, as well as cargo transfer units. However, the planning, use, and commitment of transportation assets are vested in the senior Army MCA in the theater of operation.

Air Transport

Air transport is a flexible and essential element of the transportation system. Wide-ranging CSS needs within the theater require Air Force and Army airlift assets to support the force. Although it may be restricted by weather, airlift can nevertheless provide rapid movement of cargo, passengers, and equipment without regard to terrain restrictions. Army air transport is not designed to compete with the Air Force; its purpose is not only to provide high-priority, rapid transport but to supplement the lift capability of other Army transportation.

Strategic-Level Air Transport. The Air Mobility Command provides intertheater air transportation. As a single-manager agency, it moves high-priority personnel, equipment, and supplies for all of DOD.

Theater Air Transport. Allocated Air Force support, FIN, and Army aviation units provide air transportation within a theater. Army air transport is used to extend ALOC. Airlift provides support for aerial preplanned and immediate resupply, movement of critical high-priority Class IX, retrograde of reparable, pre-positioning of fuel and ammunition, and movement of low-density/ high-cost munitions when time, distance, or road conditions prohibit ground transportation.

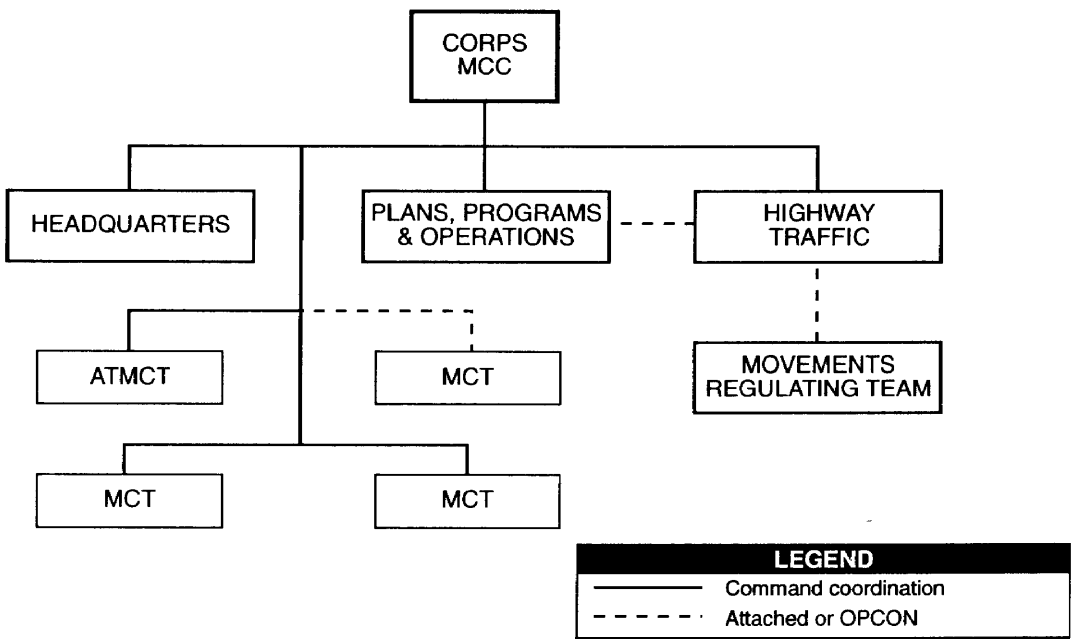


Figure 5-4. Corps Movement Control Center

Army Air Terminal Movement Control Teams (ATMCTs). Army ATMCTs, which are usually located in the Air Force terminal, are under the direction of the Army MCA. Their function is to arrange transport, coordinate loading, and expedite movement of Army units, personnel, and materiel through the terminal. Serving as the link between the Army and the Air Force at the terminal, Army ATMCTs may also interface with the HN in performing reception and onward movement functions at the APOD operated by HN agencies. The Army MCA often authorizes ATMCTs to move Army cargo from the air terminal to the consignee. ATMCTs also coordinate with line-haul modes to assure timely arrival of transportation at the air terminal or at the in-transit area.

CSS Air Movement. Army helicopters complement other modes of transportation when speed is essential. Army air transport can be designed to provide the connecting link between theater air and sea terminals and receiving supply activities, receiving units, or cargo transfer points. The corps MCC manages Army air transport originating in the corps. It obtains its airlift from the corps aviation brigade.

Motor Transport

Army motor transportation is a key element of the integrated transportation system. The most versatile mode of transport, it is normally the primary mode of support to Army forces. It provides the connecting link between the receiving units, major aerial and sea ports, supply centers, and rail and inland waterway terminals. Motor transport units not only provide support to the COMMZ but also line-haul service as far forward as the brigade support area. Functionally, motor transport falls into two general categories: nontactical and tactical.

Nontactical Movements. Nontactical movements are characterized by maximum use of available vehicles and the economical use of cargo capacities.

Tactical Movements. Tactical movements are characterized by the preservation of task organization or unit integrity for tactical control, combat loading for availability upon arrival, and speed.

Highway Regulation. Operational requirements place a severe burden on road networks, which must accommodate tactical moves, motor transport convoys, unit transportation, and all kinds of vehicles and refugees. MC planners must regulate highways to obtain efficient use, to prevent conflicts, and to support priorities. Highway regulation-the responsibility of the senior Army commander—includes planning, routing, scheduling, and deconflicting the use of certain priority road networks in the operational area. In the COMMZ, it may be a HN responsibility, performed in coordination with the senior movement control organization. Figure **5-5** shows six movement regulating teams along a main supply route.

Rail Transport

Military rail unit capabilities are limited. Therefore, US forces will rely on HN rail transportation to the maximum extent possible for port clearance and inland movement of high-tonnage and high-density equipment and supplies. The railway battalion is normally assigned to the senior transportation organization. The operation of military railways may be accomplished in three phases. Although the phases normally progress in sequence, this need not be the case. When appropriate, a Phase II or III operation may be initiated without the preceding phase.

- During Phase I, which occurs during the early stages of a military operation, military personnel operate and maintain railway lines. The employment of civilian personnel is not practical in or near the CZ. Restrictions on the employment of civilians are necessary for military or security reasons.
- During Phase II, military railway personnel, augmented with local civilian railway personnel under direct military supervision, operate and maintain railway lines.
- Phase II is instituted as soon as practicable to allow the release of military railway personnel. Local civilian railway personnel operate and maintain railway lines under the direction and supervision of the highest military railway echelon in the theater.

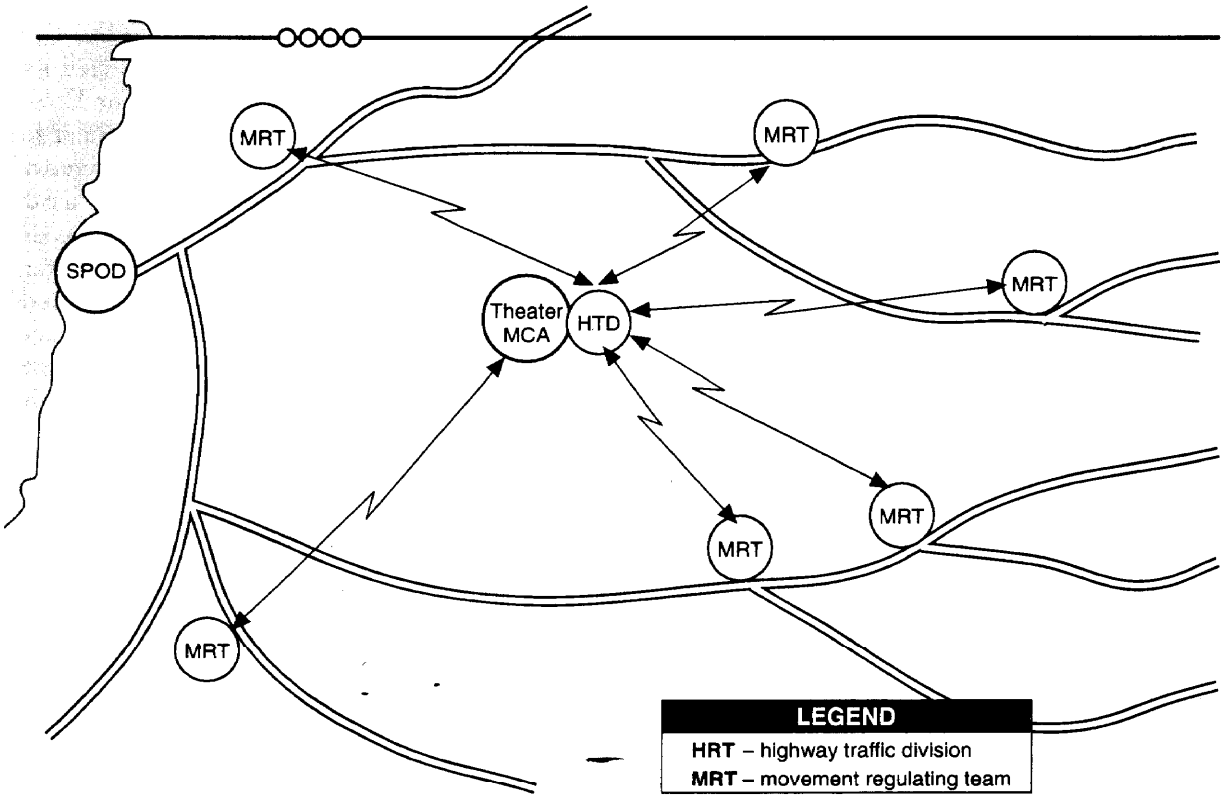


Figure 5-5. Highway Regulating Points

Water Transport

Army water transport units and teams provide water transport and port and harbor support in harbor areas and inland waterways and along theater coastlines. Water transport units support movement of military cargo and personnel through and between Army water terminals, as far forward as inland waterways and the tactical situation allow. Water terminal operations are conducted at established ports, at beach sites, or at unimproved facilities and are an integral part of inland waterway and LOTS operations. Army water transport units are normally operated as part of a terminal battalion and are attached to and commanded by an element of the transportation organization.

Types of Services. The two major types of water transport provided by Army watercraft are port and harbor logistics support and lighterage service. In harbors, the terminal battalion may employ nonbeaching vessels that are designed to provide floating craft services in port areas. Lighterage service refers to the transportation of personnel, equipment, and cargo between ships and the shoreline, fixed ports, or bare beaches. Refer to FM 55-50 for additional information.

Types of Operations. Army watercraft are used in support of various types of operations. They range from large, fixed-port operations to LOTS operations to inland waterway operations. Each type of operation may require different mixes of watercraft as well as terminal units to actually handle the cargo.

TERMINAL OPERATIONS

A terminal is any facility, regardless of size or complexity, at which cargo or personnel are loaded, unloaded, and handled in transit between elements of any of the various transportation modes. Terminals are established at origins, destinations, and in-transit transfer points.

In a theater of operations, Army terminal operations include loading, unloading, and handling in-transit cargo and personnel between any of the various modes of-

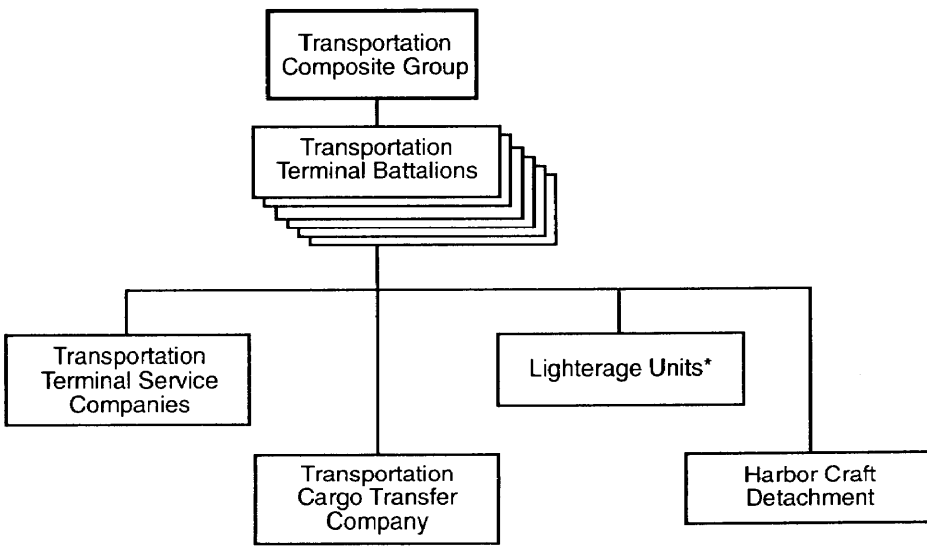
transportation. Terminals are established for cargo being carried at beginning, destination, and in-transit points. The transportation composite group is the senior terminal activity in the theater of operations. When two or more composite groups are deployed, a senior transportation organization will be assigned to the theater for C^2 of all operational-level transportation modal and terminal elements. Figure 5-6 shows a theater terminal organization. The composite group primarily commands deep-water terminals, Army air terminals, or similar activities that are conducted with adjacent or related water terminal activities. The transportation composite group is a planning and control organization that does not enter into day-to-day operations.

The Army transportation system includes headquarters elements specifically designed to provide C^2 of operating units responsible for terminal services to support mode operators. The primary categories of Army terminal operations are ocean water terminal operations and inland terminal operations.

Ocean Water Terminal Operations

Ocean water terminals are classified as fixed facilities, unimproved facilities, or bare-beach port facilities. Normally, general cargo terminal operations apply to all ocean terminals. Container, *RO/RO,* and *combination terminal* usually refer to fixed-port facilities. LOTS operations no longer refer to only bare-beach operations; the expanded definition applies to an operation where ocean-going cargo vessels are discharged to lighterage for subsequent discharge to bare-beach (improved or unimproved) facilities.

Major Port Facilities. Major port facilities are an improved network of cargo-handling facilities specifically designed for transfer of oceangoing freight, vessel discharge operations, and port clearance. Deep-draft oceangoing vessels come alongside a pier, ship, or quay and discharge cargo directly onto the apron. Most cargo is moved into open or covered in-transit storage to await terminal clearance. Selected cargo may be discharged directly to land transport. Major-port facilities may also have state-of-the-art facilities and



*Boat or amphibian companies as required.

Figure 5-6. Theater Terminal Organization

equipment to support cargo discharge and port clearance operations.

Minor Port Facilities. Any one or a combination of conditions qualifies a port as a minor. port facility that, to discharge vessels, may require augmentation from a terminal service company and shallow-draft lighterage. The use of augmenting resources qualifies as a LOTS operation. Minor port facilities have at least one of the following conditions that make them less productive than a major port facility:

- They are not designed for the type cargo carried, that is, containers.
- They lack permanent fixed equipment or the right type equipment in working areas.
- They lack or have poor clearance networks, that is, poor rail, nonexistent road.
- The berth length and/or water depth alongside the berth is insufficient for the type vessel used.
- Exposure to the elements and passing traffic hinders vessel operations.

Bare-Beach Facilities. In bare-beach facilities, Army lighterage is discharged across the beach. No facilities equipment or infrastructure may exist at the LOTS site to discharge cargo or conduct port-clearance operations. Beach terminals require specifically selected sites where cargo is delivered by lighterage to or across the beach and into marshaling yards or onto waiting clearance transportation. Landing craft, amphibians, and terminal units are used in a beach operation under the C^2 of a terminal battalion.

Container Terminals. Container terminals are specialized facilities designed for uninterrupted, high-volume flow of containers between ship and inland transportation modes and vice versa. These terminals are serviced by specialized, largely non-self-sustaining vessels loaded by high-productivity container-handling equipment. These terminals may have facilities for consolidating break-bulk cargo into containers.

RO/RO Terminals. RO/RO terminals are designed for handling cargo on wheels. They have a deep-water berth, centralized-control in- and out-processing facilities, and a large, open, unrestricted parking area. Their key element is that all cargo remains on wheels throughout the transit cycle. Nontrailerable cargo is placed on specially designed, low-silhouette cargo trailers for ocean transit.

Inland Terminal Operations

USTRANSCOM or the transportation group establishes inland terminals at both ends of and at interchange points along theater air, rail, and motor transport systems to provide for transshipment of cargo and personnel carried by these modes. Normally, operation and control of the entire inland terminal facility are the responsibility of the mode battalion or group having primary transport responsibility in the region the terminal is located.

Cargo transfer companies and trailer transfer points (TTPs) conduct inland transfer operations at terminals, depots, and-transfer points. The terminals are established throughout the COMMZ, corps, and division rear areas, as required, to provide adequate transportation service. The senior movement control organization identifies requirements for terminals serving rail and inland waterways along existing routes whenever sufficient lift capability cannot be provided by motor and air. The cargo transfer company conducts cargo transfer operations at inland terminals under the supervision of the COSCOM in the corps and senior transportation organization of the theater army in the COMMZ.

Air Terminals. Air cargo transfer operations within the theater take place at both Air Force and Army air terminals. The Air Force commander is responsible for providing terminal facilities at all points served by the Air Mobility Command or theater airlift aircraft. This responsibility includes loading and unloading aircraft. The Army commander may, by local agreement, provide personnel to participate in loading and unloading aircraft at these facilities. He may also accept responsibility for loading and unloading Air Force aircraft at forward landing fields that are not a regularly scheduled stop for theater airlift aircraft. In such cases, the cargo transfer

company would be employed. The cargo transfer company may also furnish personnel to load and unload aircraft conducting Army unit moves. The company will provide break-bulk facilities for consolidated shipments and cargo awaiting Army transport.

Motor Transport Terminals. Motor transport terminals are located at both ends and intermediate points along line-haul routes serving as a connecting link between local-haul and line-haul service or where terrain necessitates a change in the carrier or mode.

Rail Terminals. Rail terminals may include yard tracks, repair and servicing facilities, accommodations for train crews, and railheads. They are located at originating and terminating points of trains and at sites that mark the limits of rail operating divisions. Army and/or HN rail units provide intersectional transport service. The rail capability within the theater will be exploited whenever usable facilities exist.

Inland Waterway Terminals. Cargo transfer units are employed only at small intermediate cargo transfer points on inland waterway systems. Limitations on a unit's use at these points consist of the size and configuration of the waterway craft and the capabilities and capacities of the unit's cargo-handling equipment. When the waterway delivery means is composed largely of floating barges, landing craft, and similar types of floating equipment, the cargo transfer service may be used in the transshipping process.

CHAPTER 6

Personal Support

The objective of personnel support is to ensure operational success. Soldiers are the focal point of warfare, the foundation of the Army's will to win. Success in combat is directly affected by the success of PSS elements within CONUS and the theater of operations. Manning ensures that military personnel of the right type, in the right numbers, are on the battlefield. Together, the manning and personnel services portion of sustaining the force are referred to as personnel support. Its activities encompass the full range of military operations, from nation and humanitarian assistance to peace enforcement and conflict. They begin with the initial planning of an operation through mobilization, deployment, war or MOOTW, and redeployment. Whether committed to a forward-presence or MOOTW mission, personnel support must be tailored to satisfy the commander's tactical and operational requirements, either Army alone or in concert with a joint or multinational force.

MANNING THE FORCE

The manning challenges are to assure the uninterrupted flow of military personnel to the battlefield and to provide the necessary services to sustain them. Manning the force encompasses personnel readiness management (PRM), replacement management, casualty operations management (COM), and personnel accounting and strength reporting (PASR). These critical functions meet the Army personnel requirements from mobilization and deployment through redeployment and demobilization. They maintain the units' fighting strength and assist the commander during the command estimate process.

PERSONNEL READINESS MANAGEMENT

Personnel readiness describes a state of mission preparedness. The Army PRM System is a process for achieving and maintaining that state. It provides a flexible tool for selecting and assigning military personnel with the correct skills to meet the requirements before, during, and after combat. Its mission is to maximize wartime preparedness by distributing soldiers and Army civilians to commands based on documented manpower requirements and/or authorizations. It—

- Analyzes personnel strength data to determine current combat capabilities and project future requirements.
- Accounts for military personnel, reports other strength-related information, and updates command data bases at all levels.
- Starts with the comparison of an organization's personnel strength against its requirements or authorizations and ends with a personnel readiness assessment and allocation decision.

REPLACEMENT MANAGEMENT

Replacement management is the physical reception, accounting, processing, support, and delivery of military and civilian personnel, including replacements and return-to-duty soldiers. The Replacement Management System, which responds to commanders through the PRM System, moves military

personnel and civilians through CONUS replacement centers to the unit commander in the theater of operations. It provides primarily for individual replacements in all military occupational specialties and groupings of individuals up through company level as operations require. Replacement management requires real-time access to basic information about all replacements, movement status from the point of selection, and personnel readiness management information to determine the final destination of replacements and return-to-duty soldiers.

CASUALTY OPERATIONS MANAGEMENT

COM helps the personnel readiness manager and commander replace incurred losses. This system records, reports, verifies, and processes information from unit level to HQDA; notifies appropriate individuals; and provides assistance to family members. Casualty information from a number of sources must be collected, collated, and analyzed to determine appropriate action and ultimate case disposition.

PERSONNEL ACCOUNTING AND STRENGTH REPORTING

PASR is the system for recording by-name data on military personnel when they arrive and depart units, change duty status—for example, from duty to hospital—and change grades. Strength reporting is a numerical end product of the accounting process that starts with a strength-related transaction submitted at battalion and separate unit level. It ends with a data base update through all echelons of command to the Total Army personnel data base (TAPDB). The battlefield requirements of joint and multinational operations mean that commanders need to know the status of all personnel under their control. The personnel system may be asked to account for joint, allied, or HN personnel and/or provide services in a manner similar to that for Army personnel.

CIVILIAN PERSONNEL MANAGEMENT

Civilian personnel management provides essential civilian personnel and the services necessary for their sustainment. The director of civilian personnel, DCSPER, will develop civilian personnel policy. The DCSPER will also develop and coordinate policy and guidance for the expansion of DA civilian, as well as military, manpower to meet a wartime situation. The director of mobilization, DCSPER, who has overall responsibility for manpower mobilization policy, will direct and supervise formulation of the Army's personnel mobilization program. The director of mobilization and operations, DA PERSCOM, is the principal agent for coordinating and integrating manpower mobilization plans and procedures for Army transition from peacetime to wartime.

PERSONNEL STRUCTURE

In addition to conflict and mobilization, personnel units are critical during preconflict/war and redeployment activities. Normally, personnel units are among the first to deploy and the last to redeploy. Units are tailored and configured based on METT-T analysis. The senior personnel officer at the operational level makes recommendations on unit configuration, Commanders should anticipate this and plan accordingly. Personnel units are also important in MOOTW, and they must plan for providing support to military personnel involved in those operations. To support personnel readiness management, commanders should ensure that the personnel information element deploys into the theater early, usually concurrent with other sustainment data bases. The Army's personnel management system organizational structure below HQDA is divided into three areas: personnel management centers (PMCS), operational personnel units, and personnel C^2 units.

PERSONNEL MANAGEMENT CENTERS

A PMC is a task-organized functional area staff element that performs the manning function by managing critical personnel systems. It is composed of the functional area elements of a personnel organization, and its mission is distinctly separate from the personnel unit's command role. The PMC may be a staff element within a battalion, brigade, division, corps, or senior logistics headquarters, or the mission performance element of a personnel command or group. Staff elements direct personnel management operations at all levels.

OPERATIONAL PERSONNEL UNITS

Organizations that execute the personnel management mission on the battlefield as part of an integrated network are personnel detachments, postal companies, replacement battalions, CONUS replacement centers, reception battalions, and Army bands.

- Personnel detachments collect, validate, process, and manage combat-essential information; manage critical personnel systems; and provide essential services to commanders, soldiers, deployed civilians, and joint or allied personnel.
- Postal companies receive, process, and deliver mail and provide other postal services.
- Replacement battalions command replacement companies at CONUS replacement centers or at theater level. Replacement companies may be part of a replacement battalion, personnel group, or a personnel services battalion (PSB). They receive, support, and process replacements, including coordinating transportation for their movement from theater to corps, theater army area command (TAACOM), and division levels.
- CONUS replacement centers provide C^2, validate soldier readiness processing, and report and coordinate the equipping, training, and transportation of replacement personnel, DA civilians, contract civilians, American Red Cross (ARC), and federal agency/national organization personnel en route from CONUS to the theater of operations.
- Reception battalions in-process new soldiers and prior-service soldiers for initial entry training and/or advanced individual training.
- Army bands are units normally allocated to operational-level and tactical-level (corps, division) commands. They promote readiness by performing music that enhances morale, unit esprit, and civil-military operations (CMO). Bands have the secondary role of temporarily augmenting security during periods of heightened combat intensity when using them in their primary role is impractical.

PERSONNEL C^2 UNITS

The PSB exercises C^2 over assigned personnel units in the division area and operates designated personnel management systems. A PSB may command two to six personnel detachments. Depending on TOES and METT-T, it may also exercise C^2 over a replacement company, postal unit, and/or band. At corps level, personnel groups exercise C^2 over assigned personnel units and operate the personnel management system for the corps. At the operational level, the personnel command exercises C^2 over assigned personnel units and operates the personnel management system for the theater.

PERSONNEL SERVICE SUPPORT

The PSS mission enhances the combat capability of the soldier through sustainment, thereby increasing combat power. Whether committed to peacetime operations, MOOTW, or war, PSS organizations are tailored to satisfy the operational requirement of the theater independently or in conjunction with allied forces. PSS systems provide services essential to sustain the highest possible level of readiness. The services they provide to

soldiers, civilians, and family members are essential to sustain the human dimension of the force.

As the Army seeks to synchronize its warfighting capabilities with all services, the PSS community must also strive to integrate its capabilities. To ensure unity of effort, joint personnel services require formal agreements, MOUs, and exchange of liaison officers. Sustaining military personnel and their systems include PSS, HSS, field services support, quality of life, and general supply support.

Personnel support is a major function at each level of war. At the strategic level, it encompasses national mobilization and falls within the purview of national political and military-strategic leadership. Strategic personnel support deals with mobilization of reserves and national manpower and acquisition, integration, deployment, and demobilization. It links the nation's natural human resources to theater military operations. Operational personnel support focuses on reception and onward movement, allocation, management, redeployment of units and military personnel, and reconstitution operations. Tactical personnel support focuses on the specific functions of manning units and sustaining the unit's soldiers. Centralized management and assignment of military personnel and systems at the strategic level facilitate decentralized execution of personnel support at the operational and tactical levels.

PPS is an integrated system that sustains the fighting force and contributes to both the national will and the will of the soldier to fight. It is the management and execution of six personnel-related functions: personnel services, resource management, finance services, religious support, PA, and legal services. These functions are usually within the purview of the tactical unit's G/S-l, although at different echelons they may be represented by different staff officers and unit commanders. Figure 6-1 depicts the relationships between manning and sustaining soldiers and their systems.

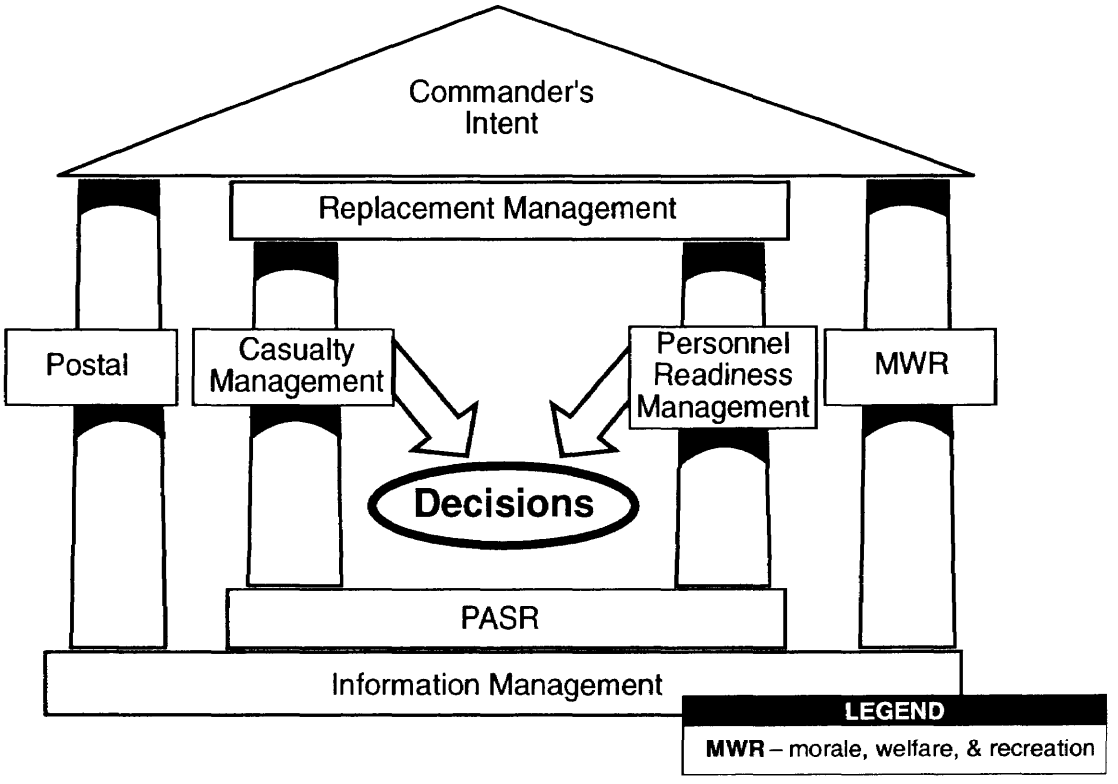


Figure 6-1. Interconnected Military Personnel Systems

PERSONNEL SERVICES

The key to understanding personnel services is recognizing that personnel services activities apply to both commanders and units (manning) and military personnel (sustaining soldiers). For instance, personnel services support soldiers by making certain they are prepared to deploy and that their personal documents, such as their life insurance and DD Forms 93, are current. This function also manages unit readiness, ensuring that the unit is manned with deployable military personnel. It further serves the commander by providing him with real-time information about the combat-ready strength of his unit personnel operations, therefore becoming a combat multiplier by providing information and support to both the commander and the soldier. Many systems that contain soldier support functions contribute to both unit and commander support. For instance, postal and MWR activities appear to support primarily the soldier. However, the morale of the unit is a combat multiplier. The ability to provide military personnel with services that improve the morale of the unit supports both the commander and soldier.

Enhanced communications allow accomplishment of some personnel functions, such as personnel information management (PIM), from CONUS or another theater, requiring deployment of only critical functions. Split-based operations, however, require careful consideration of the commander's vision and intent and application of logistics characteristics. The following paragraphs describe the personnel service systems.

Personnel Information Management

The PIM system interconnects the manning subfunctions. It collects, validates, processes, and stores critical information, manually and electronically, about military personnel and units through distributed and command data bases. It provides essential personnel information to commanders, military personnel, and families. The personnel information data base is used by—

- Personnel readiness managers to assess unit readiness and to support personnel allocation decisions.
- Casualty managers for basic personnel information and to verify casualty information.
- Replacement managers to track replacement flow through the replacement system to the ultimate unit of assignment.

This system integrates and distributes the information products necessary to man and sustain soldiers and their systems on the battlefield. The analysis of the data base information is provided to the commander to support the decision-making process. Figure 6-2 shows the connectivity of the personnel management functions for military personnel support.

Postal Operations Management

This system operates a network to process mail and provide postal services within the area of operations. Processing mail involves receiving, separating, sorting, dispatching, and redirecting ordinary and accountable mail.

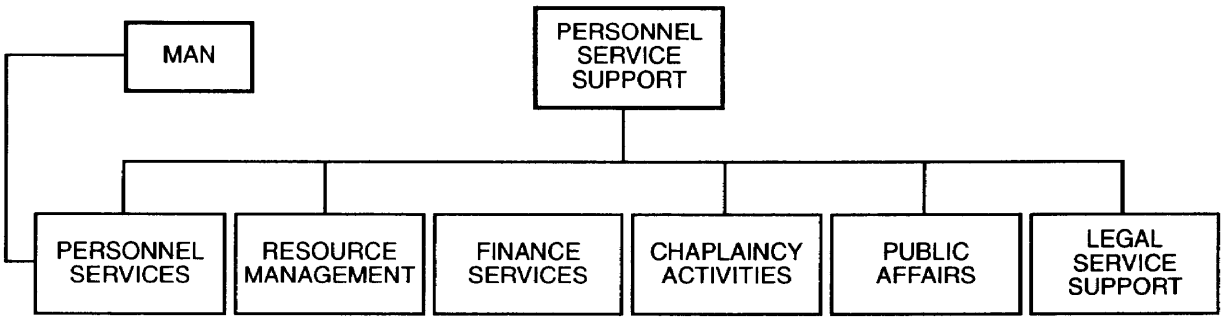


Figure 6-2. Manning and Personnel Service Support

Postal services involve selling stamps; cashing and selling money orders; providing registered, insured, and certified mail services; and handling casualty and contaminated mail.

MWR and Community Support

The mission of the MWR program is to improve unit readiness by promoting fitness, building morale and cohesion, enhancing quality of life, and providing recreational, social, and other support services for military personnel, Army civilians, and their families. During peacetime, the scope of MWR includes sports activities, recreation centers, libraries, clubs, bowling centers, golf centers, outdoor recreation, arts and crafts, and entertainment. During war and MOOTW, the MWR network provides services to the theater of operations in the form of unit recreation, library book kits, sports programs, and rest areas at brigade level and higher. Military and civilian MWR personnel staff these activities and services. The MWR network also provides facilities that house a number of MWR functions for military personnel, such as unit lounges, recreation centers with snack bars, and activity centers. The facilities provided by the MWR network depend on the theater/corps command policies and the operational/tactical situation. Community support programs include the ARC, family support, and the exchange system.

American Red Cross. The ARC consistently delivers essential Red Cross services to active duty military, National Guard, reservists, Army civilians, and their families worldwide in order to assist them in preventing, preparing for, and coping with emergency situations. During mobilization and deployment, it provides emergency communication and case management services to support the health, welfare, and morale of the armed forces and their families. ARC representatives are available at division and higher levels to assist with family emergencies and emergency communication between family members and deployed personnel. ARC provides forward deployed units a direct link to their families during family emergencies. Requests for ARC personnel to accompany US forces into a theater of MOOTW must be forwarded to the US Army Community and Family Support Center (USACFSC), Family Support Directorate (FSD). USACFSC-FSD is DOD's Executive Agent for the deployment of Red Cross personnel during these situations. It is responsible for coordinating and securing support for ARC personnel to support military operations, managing and monitoring military support to ARC, funding travel to and from the theater of operations for ARC personnel, and coordinating and preparing ARC personnel for deployment and return. The ARC's national headquarters is responsible for supplying the staff and managing and monitoring ARC operations in the field. A designated Red Cross representative will be involved with the USACFSC, the appropriate military command, and the ARC's national headquarters in contingency planning to ensure proper coordination and clarification of requirements. In the theater of operations, coordination for Red Cross support falls under the G1.

Family Support. Departure of military personnel during war or MOOTW creates substantial stress on military personnel and their family members throughout the period of separation. The morale of both the soldier and the family significantly impacts soldier performance. The family support program's mission is to foster Total Army family readiness since mission accomplishment for forward deployed units is directly linked to soldiers' confidence that their families are safe and capable of carrying on during their absence. The chain of command helps soldiers and Army civilians solve personal problems and communicate with their families through the family support system. Families of deploying personnel are provided all possible services to which they are entitled by the sustaining base/rear detachment. Services include predeployment briefings/readiness checks (wills, allotments, family care plans, insurance), frequent family briefings, survival skills training (stress management, problem solving, household and auto maintenance), and the family assistance center (counseling, the Defense Eligibility Enrollment System enrollment, legal information and referral, and Army community services). These services may need to expand to the families of military personnel in the reserve and National Guard

who have been called to active duty. DA Pam 608-47 provides more detailed information.

The Exchange System. The exchange system provides basic health, hygiene, and personal care needs to soldiers and Army civilians. A board of directors that includes senior Army and Air Force leaders directs AAFES operations worldwide. The system supports major installations in CONUS and overseas and units deployed to remote areas. It also supports field operations and exercises. The Army provides materiel, facilities, transportation, field site support, and some personnel for AAFES operations.

During war and MOOTW, the CINC-level command, in coordination with AAFES, plans for and supports exchange operations. These plans may include a combination of direct retail operations, tactical field exchanges (TFEs), and AAFES imprest funds activities (AIFAs):

- AAFES deploys personnel to assist the Army in establishing direct retail operations and an exchange warehousing and distribution system. The senior personnel manager in the operational area and the tactical level personnel manager coordinate with the senior CSS manager and tactical-level CSS manager in the process of designating, training, deploying, and employing Army and Air Force personnel to support the theater AAFES system. Preferably, these personnel have Defense Commissary Agency experience in supply management, warehousing, distribution, and/or retail operations. AAFES may establish these activities using AAFES employees, contract operators, and/or third country national employees or vendors.
- TFEs are military-operated exchanges designated to provide merchandise and services on a temporary basis in areas where permanent exchange activities are not present. TF'Es serve soldiers and Army civilians and may locate as far forward as the brigade support area and tactical situation allow. They are manned by Defense Commissary Agency personnel or detailed military personnel.
- AIFA is a military-operated retail activity, usually operated in small or remote sites, when regular direct-operation exchanges cannot be provided. It is operated basically the same as a TFE except that the unit is accountable and responsible for the merchandise that it purchases. Should commanders choose to employ AIFA, they must select and train personnel from their units to operate these activities. AAFES issues the unit a fund to purchase an initial inventory. Money generated from sales is used to replenish the merchandise stock. A site commander can request the establishment of an AIFA from the general manager of the AAFES geographical area.

Other Essential Personnel Services. Other personnel services include general services such as voting, safety, and heraldry. They also include awards and decorations, noncommissioned officer and officer evaluations, enlisted promotions and reductions, officer promotions, enlisted and officer transfers and discharges, identification documents, leaves and passes, line-of-duty investigations, officer procurement, retention, and recruiting, and band operations. For more information, see FM **12-6.**

RESOURCE MANAGEMENT

During peacetime, the resource. management mission is greatly expanded to provide a full range of financial services, since fund availability determines the ASCC's ability to refine the force structure and train and maintain for war. During the transition phase of operations, the DCSRM retains its organizational structure in an established (mature) theater. However, variations in staffing are necessary as the scope of functions is adjusted to the intensity level of the conflict. The ASCC, in coordination with HQDA, determines staffing variations. Financial transactions will continue to be reported unless Congress suspends or modifies them. The level of formal accounting functions to be performed in the theater depends on the location, type, and duration of the hostilities. For details, see FM 14-6 and other resource management guidance. The DOD contract construction agent is responsible for managing military contract construction funds in the theater.

FINANCE SERVICES

The finance mission is to sustain the Army during joint and multinational operations by providing timely commercial vendor and contractor payments, various pay and disbursing services, and limited accounting. This support provides the warfighting commander with a significant combat multiplier. Military pay, travel, and disbursing are missions that offer morale support and, as such, provide an additional combat multiplier.

As directed, the senior finance commander in the theater is responsible for providing finance support to all joint and multinational commands and policy and technical guidance to finance units. He is responsible for accomplishing centralized theater support missions such as currency funding, commercial accounts, foreign national pay, and appropriated and nonappropriated fund accounting. When designated by DOD, the Army's senior finance commander—

- •Provides currency funding support to other US and allied organizations in the theater.
- •Establishes theater financial policy to ensure consistent application of DOD finance and accounting (F&A) policy.
- •Coordinates finance support requirements within the theater.
- •Recommends allocations of finance units in theater,
- •Reviews theater operations plans and prepares annexes to ensure proper support of operations.
- •Coordinates HNS for F&A.
- •Supports noncombatant evacuation operations (NEO).
- •Coordinates and performs logistical, operational, and administrative actions for assigned finance units.
- •Ensures operational readiness of assigned finance units.

Finance units provide the full range of F&A services to all military personnel and units in the theater as described in FM 14-7. They also-

- •Formulate command financial policy and establish finance procedures.
- •Provide finance support for the AOR within the theater by preparing and paying commercial vouchers, travel vouchers, and foreign national payrolls; cashing negotiable instruments; funding tactical exchange facilities and other nonappropriated fund instrumentalities; and accounting for pay to enemy prisoners of war (EPW) and civilian internees.
- •Provide currencies for local procurement payments, foreign national payrolls, imprest funds, combat payments, day laborer payments, intelligence and counterintelligence operations, and claims.

During conflict or war, the level of formal accounting services performed by the finance elements in the theater of operations depends on the intensity, duration, and location of the conflict. Based on the JTF or theater commander's recommendation, in coordination with the Assistant Secretary of the Army for Financial Management, the theater commander will approve the transfer of accounting functions to a designated finance support activity (DFSA) in CONUS. After transfer, the finance element will continue to ensure that necessary documentation and data are provided to the DFSA to accomplish the accounting function.

The ASCC suspends normal payday operations during war, and support for the procurement process becomes the finance element's critical mission. He also establishes the amounts of monthly cash payments made to individual soldiers. Finance support teams pay soldiers when and where their commanders desire. They are able to make contract payments, commercial vendor payments, and combat payments and to process pay inquiries.

RELIGIOUS SUPPORT

Unit ministry teams provide religious support to the deployed force. As a minimum, the teams consist of one chaplain and a chaplain assistant. Their support includes—

- •Preparing/coordinating religious support plans and annexes to OPLANs/OPORDs.
- •Conducting rites, ordinances, and worship services and administering sacraments.
- •Providing pastoral care and counseling.

- Supporting battle fatigue prevention and treatment programs.
- Advising the commander and staff on religion, morals, and morale and the impact of indigenous religions on military operations.

The senior chaplain on each staff serves as a special staff officer to the respective commander. He supervises his own staff and provides staff supervision of religious support in subordinate units. He also coordinates religious support with chaplains of other US services, as well as allied and HN religious leaders. The commander charged with rear area operations is responsible for religious support in the rear area. His staff chaplain coordinates religious support.

PUBLIC AFFAIRS

The American people have a right to know about Army operations. More importantly, the Army has a vital interest in ensuring an expedited flow of complete, accurate, and timely information about them. Doing so fulfills the Army's obligation to keep the American people informed. It also helps to establish the conditions that lead to confidence in America's Army and its conduct of operations in peacetime, conflict, and war. When military personnel, their families, the nation's political leaders, and the general public perceive that the Army is conducting operations competently, professionally, and ethically, the morale, esprit, and effectiveness of our force are enhanced. This is critical to successful mission accomplishment.

Leaders must understand that the perception of an operation can be as important to success as its execution. They need to recognize that the global visibility of today's media is bridging the gap between the strategic and tactical levels so that a tactical victory can be an operational or strategic loss and vice versa. They have to appreciate that the media's ability to provide detailed graphics and live coverage of events from anywhere in the world has made military operations into spectator events watched in real time by the American public, allies, and adversaries. They must realize that this allows media personalities, politicians, pundits, critics, academics, and "armchair quarterbacks" of every bent to become active participants in debates about the way the operation is being conducted.

The key to achieving an expedited flow of complete, accurate, and timely information about Army operations is the integration of PA estimates and recommendations into the planning and decision-making process. PA elements must—

- Assess internal and external information needs and expectations and analyze what the media is publishing.
- Develop strategies that support open and independent reporting.
- Ensure that their strategies are synchronized with higher headquarters' PA guidance.
- Carefully coordinate their efforts with related information communication functions such as combat camera, CA, and PSYOP.

PA success comes from open, honest, proactive information communications. PA personnel serve as the interface between the military and the media. They work to communicate the Army prospective and to ensure that reporting is fair and balanced. They try to educate media representatives on the military and the operation, and they prepare military personnel to interact with the media. Although the commander and the PAO are the organization's official spokespersons, all military personnel are potential spokespersons, The media often perceive junior soldiers as especially candid, honest, insightful, and credible. PA personnel play a key role in facilitating media-soldier interaction.

In addition to serving as the interface between the military and the media, PA supports the commander's program to ensure that the information needs of military personnel and their families are met. PA personnel develop a strategy based on critical information needed to understand the operation and the mission and to maintain morale and esprit. This strategy identifies the product requirements for communicating information within the theater and between the theater and home station. It synchronizes

commercial contract services and Army production capabilities to most effectively and efficiently provide optimum command information.

LEGAL SERVICES

The commander's ability to maintain morale, order, and discipline enhances unit combat readiness. When morale, order, and discipline are absent, unit readiness suffers. Organizational morale depends upon the command's ability to care for the soldier and protect him from unnecessary concern about legal issues affecting his family. As described in FM 27-100, legal service support to the command, the organization, and the soldier is accomplished within a theater of operations through seven functional areas: administrative law, contract law, criminal law, international law, operational law, claims, and legal assistance.

Personnel in SJA sections at every major echelon of command, from division to theater, provide legal service support. Legal specialists are located at battalion and brigade to ensure liaison with unit commanders and soldiers. The SJA is a member of the commander's personal and special staff. As the commander's personal legal advisor, the SJA implements the commander's policies under the preventive law program and establishes the climate for disposition of legal matters.

Order and discipline depend on the commander's ability to effectively dispose of violations against persons and property while protecting the rights of the soldier, the victims, and the unit. The soldier or civilian and his family are supported through premobilization legal planning, payment of claims for damages and loss arising from military service, and the preventive law program. Military judges and defense counsel provide the command with the prerequisite assets needed to dispose of courts-martial and other adversarial proceedings against a soldier. These assets are assigned to a field operating agency of the judge advocate general (JAG) with duty at installations or appropriate headquarters. The JAG service organizations augment SJA offices, usually at echelons above division, to ensure that appropriate legal assets are available. See AR 27-1 and AR 27-10 for more details.

CHAPTER 7

Combat Health Support

This chapter discusses the purpose of combat health support (CHS) at the operational level and the current HSS force organization. The basic HSS mission is to conserve the fighting strength. Health services are employed to provide the most benefit to the maximum number of personnel. Patients are examined and treated and returned to duty as close to their unit as possible or, if unable to return to duty, evacuated further to the rear.

INITIAL COMBAT HEALTH SUPPORT

During the initial stages of establishing a CSS base, it may become necessary to perform CHS operations in one or more areas simultaneously. With assured ALOC and signal/satellite communications capabilities, medical units may provide support from an intermediate support base, a lodgment area, at CONUS installations, or afloat. Army medical facilities will be able to provide real-time diagnostic consultive services to forward MTFs. An enhanced telecommunications capability also reduces the requirement to employ the most critical skilled physicians into forward deployed facilities, It permits strategic managers to centralize critical professional skills and services. Examples of where CHS operations may be conducted are--

- In a forced-entrv operation into an area that would not be arnenable to the employment of an Echelon III hospital, such a facility could be established in a third country near the operational area or afloat.
- In situations where SLOC have not been established, pre-positioned medical stocks may be maintained afloat.

JOINT COMBAT HEALTH SUPPORT

In joint operations, each military service operates its own CHS system, and health services —including hospitalization—may be provided. Health care facilities may provide service on a joint basis when directed by the JFC to maximize the availability of beds and services. Although joint staffing is not a requisite to joint use, staff augmentation from service components may be required. When one service uses personnel or medical elements from another service, the borrowing service assumes OPCON over those elements. However, administrative responsibility remains with the lending service.

Upon activation of a JTF, a command surgeon is designated from one of the component services as the JTF surgeon. The surgeon's staff should be jointly manned when possible and of sufficient size to effectively facilitate joint coordination of CHS initiatives, regionalization, standardization and inter operability, review of plans, and integration with the overall operation. The joint force surgeons must assess component command CHS requirements and capabilities and provide guidance to enhance effectiveness of CHS through shared use of assets. They usually have responsibility for—

- Assisting the JFC in formulating a recommended patient evacuation policy for the theater of operations.
- Assisting component commands in identifying what CHS each component requires and who is responsible for providing it.
- Advising the JFC on CHS aspects of combat operations, combat stress control and reconstitution policies, preventive medicine (PVNTMED), and other factors that could affect operations.
- Informing the JFC about the status of CHS units, highlighting problems and other areas of interest or concern.

- Monitoring the status of patient beds, health service logistics (including blood products), staffing, and other issues affecting medical readiness; resolving shortfalls; and recommending solutions to the JFC.
- Informing the JFC about the status of CHS and assistance required by and provided to civilians, detainees, and EPW.
- Coordinating CHS provided to or received from allies or other friendly nations.
- Coordinating medical intelligence support for CHS organizations.
- Supervising the activities of the Joint Medical Regulating Office (JMRO) and Joint Blood Program Office (JBPO).
- Preparing CHS portions of CSS annexes to joint force plans.
- Preparing patient estimates based on casualty planning factors established by the component commands.
- Coordinating veterinary support within the theater.
- Advising the JFC on CHS aspects of the *Geneva Conventions.*

Liaison must be established between the joint force command surgeon and each component command surgeon to ensure that mutual understanding of technical medical and dental procedures, unity of purpose and action, and joint service support are maintained.

THEATER ARMY MEDICAL MANAGEMENT INFORMATION SYSTEM (TAMMIS)

The TAMMIS supports the information management requirements of field medical units during war and MOOTW. It aids Army medical personnel in their mission of transporting, treating, and tracking patients, as well as managing medical materiel at field medical activities worldwide. It assists them by providing timely, accurate, and relevant medical management in the following functional areas: medical patient accounting and reporting (MEDPAR), medical regulating (MEDREG), and medical logistics (MEDLOG).

The MEDLOG functional area is further divided into medical supply, medical maintenance, medical optical fabrication, and medical assembly management. Readiness is enhanced and transition to combat operations facilitated by the use of the medical supply system in both fixed and deployable medical treatment facilities. TAMMIS will interface with other services' systems, but each service will utilize its own independent system. The requisite interfaces among TAMMIS and other key management information systems, for example, SIDPERS, will strengthen the Army accounting and management processes in the theater.

COMBAT HEALTH SUPPORT FUNCTIONS

The theater CHS system is a single integrated system from the FLOT to CONUS. Since forward-site medical treatment facilities (MTFs) are light and mobile (battalion aid stations, clearing stations), a system of echelons of care is used to provide continuity as the patient is evacuated from forward areas to MTFs staffed and equipped to handle their medical needs. These facilities are normally in the corps and COMMZ.

The dynamics of our global responsibilities require a flexible CHS system to support the diversity of military operations. Designed to sustain and protect the health of service members, the system extends from the point of wounding, injury, or illness, through the theater of operations, to CONUS medical centers. CHS is organized forward from CONUS, throughout the theater, and laterally within the operational zones. It is provided at echelons of care referred to as Echelons (or Levels) I through V. Echelon V refers to care provided at CONUS medical centers. The capability of each echelon of care is designed to -

- Meet the characteristics of the operational environment.

- Provide a specific scope of care within the boundaries of its resourced capabilities as part of the progressive (echelon) treatment, hospitalization, and evacuation of sick, injured, or wounded soldiers.

From the FLOT to the CONUS base, each successive echelon of medical care has the capability to perform functions of the lower echelon and additional capability that cannot be located farther forward. This concept allows higher echelons of care to reconstitute lower echelons. Figure 7-1 illustrates the echelons of the CHS system in a theater and CONUS.

Overall responsibility for CHS for the Army component in a theater rests with the senior Army commander. Normally, a medical command (MEDCOM) headquarters commands and controls the theater CHS structure. However, a medical brigade may be the C^2 unit of the medical support elements based on the size of the operational-level medical force in a force. It provides the flexibility to shift assets to support additional theater buildup, reallocate medical assets to accommodate patient workload, and reconstitute lower-echelon medical units. If the operation expands into a multicorps force, the medical support headquarters may upgrade to a fully staffed MEDCOM headquarters. CHS will normally be established on a regional basis.

The commander of the operational-echelon-of-care medical support element will function as the Army component chief surgeon responsible for providing information, recommendations, and professional medical advice to the senior Army commander and his staff. The surgeon maintains current data on the status, capabilities, and requirements for CHS in the theater. The surgeon plans, coordinates, and develops policies for the support of Army forces as a whole. Theater CHS functions include-

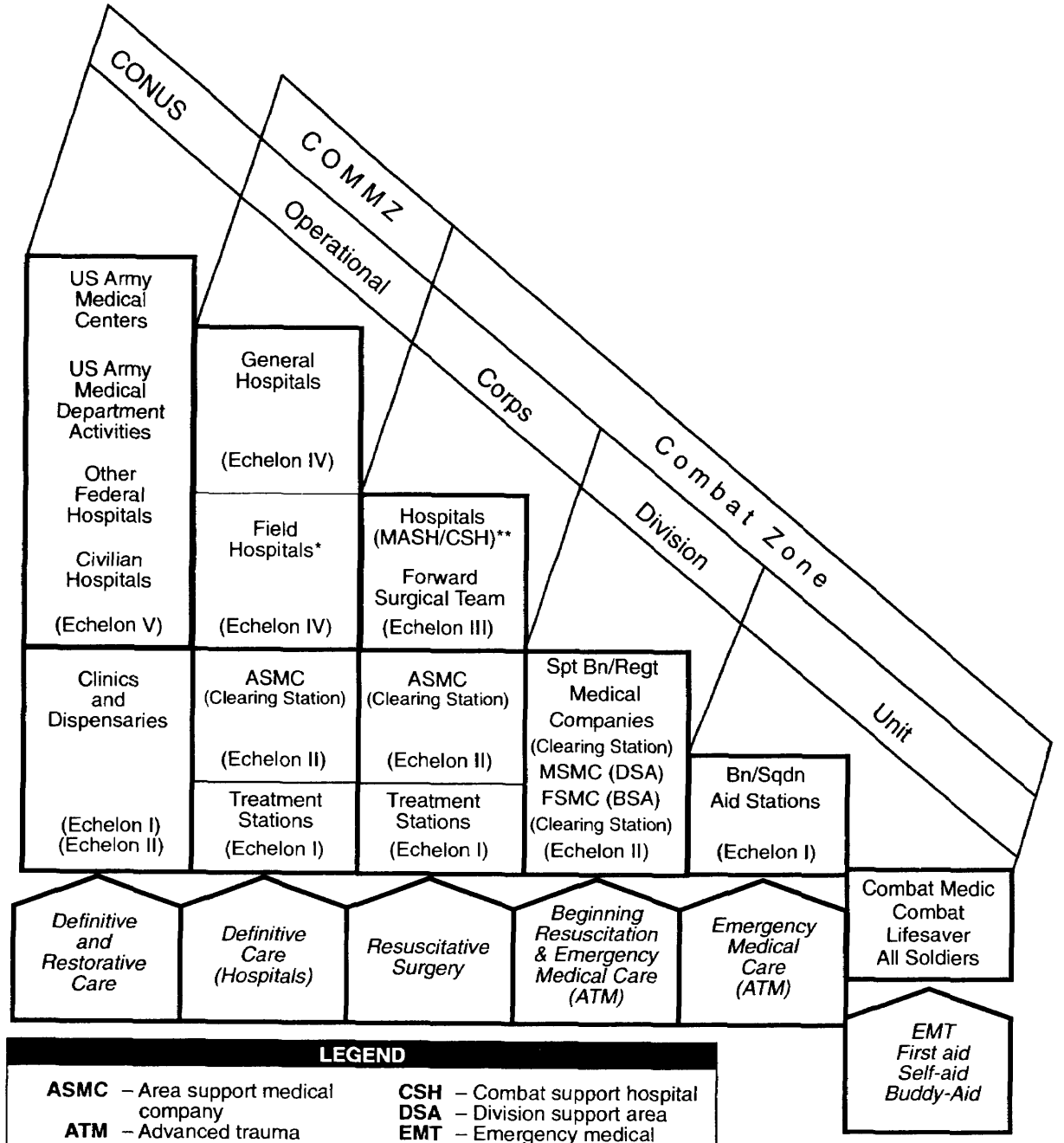
- Patient evacuation.
- Medical regulating.
- Hospitalization.
- Health service logistics.
- Blood management.
- Dental services.
- Veterinary services.
- Preventive medicine.
- Combat stress control (CSC).
- Area medical support.
- Medical laboratory services.
- Medical information management.

PATIENT EVACUATION

Patient evacuation is the timely, efficient movement of wounded, injured, or ill persons from the battlefield and other locations to an MTF. Patient movement is coordinated with the US Air Force Aeromedical Evacuation Control Center (AECC), the MEDEVAC element, and the senior MC element as appropriate.

USAF aeromedical evacuation liaison teams (AELTs) are located at the senior medical C^2 headquarters or MTF as required to assist in coordinating evacuation missions. In coordination with the Armed Services Medical Regulating Office (ASMRO) and the military services, USTRANSCOM provides MEDEVAC of patients to CONUS in support of worldwide requirements of supported CINC, USTRANSCOM component commands have the following responsibilities:

- The Air Mobility Command is responsible for providing theater, strategic, and domestic AE. The MSC assists, as required, in arranging or providing patient movement by sea. However, it does not normally provide medical personnel or hospital ships for MEDEVAC. Hospital ships are US Navy assets operated by the CINCs, Atlantic Command and Pacific Command, as part of the Ready Reserve fleet. Embarked medical personnel are also US Navy assets assigned to various naval medical units, none of which are part of MSC.
- The MTMC assists, as required, in the arrangement or provision of patient movement from the theater APOD to the CONUS medical treatment facility. For this movement, MTMC requests priorities and allocation of civil ground and air transportation resources with the exception of dedicated civil air transportation provided by the AE CRAF from the Department of Transportation.



7-1. Echelon of Care

The MEDCOM MEDEVAC battalion performs ground, air, and rail (if available) MEDEVAC of Army personnel within the COMMZ. This mission is accomplished with organic ground and air ambulance companies and attached rail ambulance detachments.

Aeromedical Evacuation

The US Air Force AE System is the primary mode for evacuating patients from the corps to the COMMZ and from COMMZ to CONUS in the initial stages of military operations. If military operations expand or become prolonged, feasible surface transportation may also be employed. Coordinating patient evacuation plans with the flow of tactical and logistical traffic into and out of the CZ is essential. Both air and ground ambulances of the COMMZ ME DEVAC battalion are employed in the COMMZ area. Requirements for Army air ambulances are reduced if adequate airheads, hard-surface roads, railroads, and/or inland waterways exist.

Strategic Aeromedical Evacuation

The strategic AE system normally operates between an overseas theater and CONUS. Strategic AE during combat operations maybe accomplished on the retrograde portion of the USTRANSCOM-assigned airlift missions or on dedicated AE CRAF missions. The aeromedical CRAF may be employed to augment military aircraft returning selected patients to CONUS. The strategic AE system begins in the theater at the fixed aeromedical staging facilities (ASFs) and other established airfields within the theater, illustrating that strategic lift occurs within the theater as well as between the theater and CONUS. This is also true for strategic lift within the theater during the CINC's concentration of forces and CSS prior to going to war.

Operational-Level Aeromedical Evacuation

The theater AE system is the responsibility of the Air Mobility Command in coordination with the Air Force component commander. The theater system differs from the strategic system in that it is highly mobile and designed to deploy on short notice to any airfields and landing zones, particularly those used to resupply combat ground forces by theater airlift aircraft. The theater AE System is usually confined to a specific theater and provides evacuation from the CZ when requested by a service or joint force component commander.

Domestic Aeromedical Evacuation

AMC in CONUS operates the domestic AE System and moves patients from aerial ports to final destination hospitals and between CONUS MTFs. Figure 7-2 depicts the patient evacuation flow and types of MEDEVAC resources that may be available for movement of patients. For additional details, refer to Joint Pub 4-02.2. The responsibilities and functions of the elements of the domestic AE System follow:

- The AECC maintains, directs, and coordinates all functions pertaining to the efficient movement of patients using the AE system. When movement requirements exceed the capability of the system, the AECC notifies the command surgeon of the joint force command to seek alternative modes of transportation.
- To facilitate patient movement, an AELT provides a direct communication link between the medical treatment element of any user service providing patients for AE and elements of the AE System. The AELT coordinates with component medical regulating officers (MROs), the AECC, and the mobile aeromedical staging facility (MASF).
- ASFs, used for strategic AE, link theater and strategic systems. Medical treatment elements provide medical supplies. ASFs are located on or in the vicinity of an air base or an airstrip.
- The MASF is a mobile, tented, temporary staging facility deployed to provide supportive casualty care and administration. Each one is capable of routinely holding and processing 25 patients. However, they are not intended to hold patients for extended periods or even overnight. MASFs have no organic patient transportation capability. Therefore, the user service is responsible for

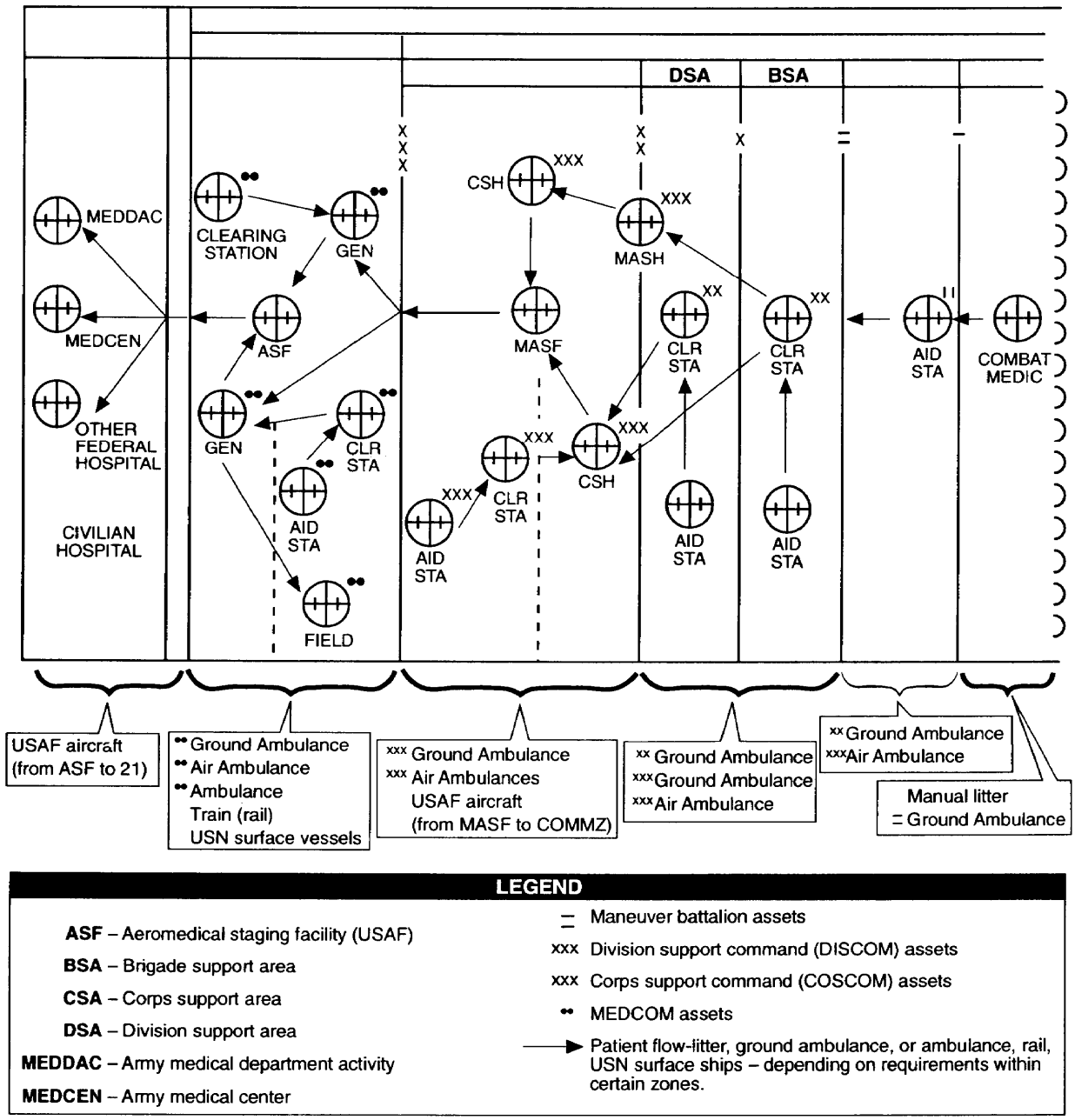


Figure 7-2. Patient Evacuation Flow and Theater MEDEVAC Resources

patient transportation to and from the MASF.

- The AE control element is the functional manager for AE operations at its airfield. It is under the OPCON of the AECC responsible for its area.

MEDICAL REGUL.ATING

Medical regulating is a patient management system designed to control and coordinate the movement of patients from site of injury or onset of disease through successive echelons of medical care to an MTF that can provide the appropriate care and treatment. Prompt movement of patients to the required echelon is necessary to avert morbidity and mortality. The wartime regulation and evacuation of patients within the CZ between Echelons I through III MTFs are the responsibility of the service component commander. In the CZ, the service components are responsible for plnning, organizing, and

executing patient evacuation from an injury site to the nearest MTF. The regulation of casualties from Echelons III and IV and the subsequent regulation from the theater to CONUS are accomplished jointly by the JMRO and the ASMRO.

Joint Medical Regulating Office

The JMRO, which functions as part of the joint force surgeon's section, is responsible for ensuring that patients are moved to medical facilities within the theater of operations that can provide the required care. It also coordinates the movement of patients to CONUS with the ASMRO. In the CZ, component commanders are responsible for patient regulating within their AOs. The command surgeon may establish area joint medical regulating offices (AJMRO) to provide regional regulating. The JMRO and AJMRO have responsibility for—

- Developing and recommending to the command surgeon overall policies, procedures, and guidance for reporting MEDEVAC requirements.
- Maintaining direct liaison with the ASMRO, MEDREG offices of the component commands, and agencies that furnish MEDEVAC transportation.
- Obtaining reports of available beds from the component commands.
- Selecting facilities to receive patients requiring medical care at another MTF.
- Coordinating with ASMRO for beds in CONUS for patients requiring movement out of the theater of operations.
- Obtaining, consolidating, and disseminating current and projected estimates of MEDEVAC requirements within the joint force and to CONUS.

Armed Services Medical Regulating Office

The ASMRO is a joint agency operated by the Chief of Staff, US Air Force, as Executive Agent, and subject to the direction of the CJCS. ASMRO performs a supporting role to the combatant commands. It regulates patients from theaters of operation based on requests from a JMRO to CONUS MTFs capable of providing the required care. In making the medical regulating decisions, ASMRO coordinates with USTRANSCOM to make optimum use of transportation assets. The ASMRO is also responsible for MEDREG within CONUS. To accomplish the MEDREG mission, ASMRO must maintain continuous liaison with the JMRO.

HOSPITALIZATION

Hospitalization is part of the theaterwide system for caring for sick, injured, and wounded patients. It is designed to provide patients with surgical and medical resuscitative, definitive, and specialty treatment. Patients with rare and unusual or complex conditions are evacuated to hospitals that can provide them with needed specialized treatment. Within the medical system, the scope of patient care and treatment capabilities can be adjusted to provide maximum effort to the individual patient and to manage the mass casualty situation (resources to workload).

The four types of hospitals that may be employed in a theater of operation are general hospital (GH), field hospital, combat support hospital (CSH), and mobile army surgical hospital (MASH).

- The number of GHs and field hospitals employed in the COMMZ will depend on the theater evacuation policy, the size of the CZ force supported, the amount of warning time prior to hostilities, and the availability of US Air Force evacuation assets. If a short theater evacuation-policy is established and the CZ force is corps-size or less, fewer hospitals are employed. GHs and field hospitals provide hospitalization for Army patients originating from within the COMMZ and for those patients received from hospitals in the CZ.
- CSHS and MASHs are normally employed in the CZ; however, they may be deployed in the COMMZ if the situation requires. The general, field, and combat support hospitals are capable of handling all categories of patients, whereas the MASH is limited to handling nontransportable surgical patients only.

Forward Surgical Team

The forward surgical team is a corps augmentation for divisional and nondivisional medical companies that will replace the MASH. Organic to the airborne and air assault divisions, it will provide emergency/urgent initial surgery and nursing care after surgery for the critically wounded/injured patients until they are sufficiently stable for evacuation to a theater hospital.

HN Hospitalization System

Wartime HNS is planned to augment joint medical assets for patient care. Health services may be provided to indigenous civilian personnel engaged in special or unconventional operations when authorized by the CINC. Allied patients treated in US MTFs will receive the same care as US patients. At the earliest possible time, allied patients are transferred to MTFs operated by their country. Theater army medical liaison teams coordinate transfers.

Enemy Prisoners-of-War

In accordance with the *Geneua Convention* of 1949, EPW are provided the same medical care as that received by US personnel. A specific hospital in the COMMZ may be designated to treat them; however, all Army medical treatment facilities in the theater will treat EPW when required. For additional information on CHS for EPW, see FM 8-10.

HEALTH SERVICE LOGISTICS

Health service logistics includes—-

- Class VIII medical supplies—medical materiel to include medical-peculiar repair parts used to sustain the CHS system.
- Medical maintenance.
- Optical fabrication.
- Blood management and distribution.
- New technology like oxygen generation.

The system focuses primarily on health service logistics support where and when it is required in the fastest, most inexpensive, and most practical way possible.

The theater medical materiel management center (T MM MC) will serve as the management interface with CONUS-based Class VIII NICP and service item control centers. It coordinates logistics data flow with the US Army Medical Materiel Agency (USAMMA) in CONUS and coordinates with the senior MC organization for movement of medical materiel assets in theater. The TMMMC will provide an advance team as part of the lead elements to ensure coordination of medical materiel to early mobilized medical units. See FM 8- 10-5 and FM 8-55 for comprehensive discussions on this subject.

The MEDLOG battalion (rear) is responsible for resupplying Army medical units in the COMMZ and resupplying the corps MEDLOG battalion (forward). The MEDLOG battalion (forward), in turn, is responsible for resupplying corps divisional and nondivisional medical units. The MEDLOG battalion (rear) in support of joint/or multinational operations performs the single integrated medical logistical manager mission in conjunction with the TMMMC.

Initially, resupply to the theater is provided by preplanned, time-phased shipment of medical resupply sets from the CONUS strategic logistics system. When possible, medical supplies are shipped directly to the corps MEDLOG battalion (forward) from the CONUS wholesale logistics base. This happens when required supply echelons of care are determined and normal replenishment, based on theater demand, replaces the preplanned resupply system.

BLOOD MANAGEMENT

The theater and CONUS blood programs are a combined DOD effort. In the theater, the joint force command establishes a single blood management program to meet the needs of the command. The program is theaterwide and interfaces with the CONUS blood-banking system.

All components within the joint force command maintain a separate military blood program. Each service appoints a military blood program officer to manage its program. The senior medical headquarters' TMMMC manages the Army's blood program. The Army blood program officer (ABPO) interfaces with the JBPO, who is the single blood manager for the theater. The JBPO interfaces with the Armed Services Blood Program Office (ASBPO) in CONUS.

In contingency operations, if the vast majority of personnel are Army, the ABPO would become the JBPO for the COMMZ. In a relatively short contingency operation, blood would not normally be drawn from troops in the CZ because of the short amount of time involved and the lack of acclimatization of the personnel. Blood products would be provided from CONUS base through the ASBPO. See FM 8-10 and FM 8-10-5 for additional discussions.

An area joint blood program office (AJBPO) may be established, under the management of the command surgeon, upon activation of the JTF. The AJBPO (JTF) performs similar blood program management functions as the JPBO at the joint force command echelon of care, but with a lesser magnitude within a designated/ assigned AOR. The AJPBO (JTF) is joint-service-staffed with personnel from the medical laboratory and administrative specialties and can include permanently assigned staff, reserve augmentation, and personnel provided by component services. See FMs 8-10 and 8-10-5 for additional discussions.

DENTAL SERVICES

Initially, dental personnel organic to divisional and nondivisional medical companies perform dental *services.* Most care at this echelon (Echelon II) is emergency in nature and designed to relieve patients of pain, to prevent the recurrence of pain, and to return soldiers to their units as quickly as possible with minimum patient evacuations. FM 8-10-19 provides a comprehensive discussion of dental support.

VETERINARY SERVICES

The Army veterinary service provides support to all component commands, including—

- Control of zoonotic diseases.
- Care for DOD-owned animals.
- When authorized, veterinary care for animals of local indigenous personnel in conjunction with medical civic action and CA programs.
- Veterinary laboratory support.
- Inspection and laboratory examination of subsistence items for wholesomeness and quality.
- The food safety service listed below to the Army, Navy, arid Marine Corps components. The Air Force provides the same support to its own forces:
- Inspection of all food following NBC exposure that is received, stored, and issued in the theater of operations.
- Inspection of facilities supplying, storing, and issuing subsistence items.

PREVENTIVE MEDICINE

The prevention of illnesses and disease is the most effective and least expensive means of providing commanders with the maximum number of vigorous soldiers. Timely implementation of preventive measures can significantly reduce the adverse impact that disease and nonbattle injuries (DNBI) have on the force. The results of these actions serve as a force multiplier.

PVNTMED support within the COMMZ functions as a wholly integrated system from the individual through the theater echelon of care. The PVNTMED detachment, sanitation; the PVNTMED detachment, entomology; and the PVNTMED section of the area support medical battalion (ASMB) provide PVNTMED both in the CZ and COMMZ. Elements from the AML also provide PVNTMED support. See FM 8-55 for a discussion of PVNTMED support in the theater of operations.

COMBAT STRESS CONTROL

Main support battalion, separate brigade, armored cavalry regiment (ACR) medical companies and troops, and ASMBs provide CSC support. They receive further support from CSC companies or detachments assigned to the CZ/COMMZ medical brigade. CSC preserves fighting strength by minimizing losses due to battle fatigue and neuropsychiatric disorders. The focus of Army CSC is on—

- Promotion of positive mission-oriented motivation.
- Prevention of stress-related casualties.
- Treatment and early RTD of soldiers suffering from battle fatigue.
- Prevention of harmful combat stress reactions such as misconduct stress

behaviors and posttraumatic stress disorders.

AREA MEDICAL SUPPORT

The ASMB provides area medical support in the CZ and COMMZ. This unit provides Echelons I and II CHS and medical staff assistance for all assigned and attached elements of the corps and COMMZ. It incorporates modular medical support systems that are found in the division medical structure. A secondary mission is to reconstitute the division medical structure or to support rear battle. Both Echelon I and Echelon II CHS maybe provided in accordance with geographical areas or sectors suggested by supported units.

The ASMB medical companies establish treatment stations and provide Echelon II CHS (inclusive of dental, laboratory, x-ray, mental health, preventive medicine, and optometry services) over wide geographic areas. Both Echelon I and Echelon II CHS maybe provided in accordance with geographical areas or sectors suggested by supported units. The ASMB also provides trauma treatment and MEDEVAC in support of rear operations within the COMMZ. Their mission includes providing medical assessment and medical triage in area damage control operations.

MEDICAL LABORATORY SERVICES

Under the senior medical headquarters, an area medical laboratory (AML) is established in the COMMZ. This high-technology independent laboratory has major operational sections that include anatomic pathology, biochemistry, entomology, epidemiology, microbiology, and veterinary. Its primary role is evaluating the total health environment in the theater, rather than providing individual patient care. This involves an increased role in analyzing and evaluating the effect of NBC agents. The AML is capable of analyzing patient and animal specimens and samples of food and water. It conducts studies in—

- Aerospace and forensic pathology and toxicology.
- Pest identification and the efficacy of pesticides.
- Frequency and effects of infectious agents and diseases.
- Identification of microorganisms and monitoring of immune response.
- Transmission of zoonotic diseases.

Medical laboratory services are available at all echelons of care—except Echelon I—on an area basis. These services provide subject-matter expertise to commanders regarding risk assessment, preventive measures, and the medical management of illnesses caused by endemic agents and conditions introduced by threat forces. The AML can also serve as the base for research and development efforts.

MEDICAL INFORMATION MANAGEMENT

The proper management of medical information is critical to providing medical support. Decisions such as where to treat casualties and when to evacuate to hospitals depend on knowing what medical resources are available at all times. An effective automated medical management information system provides the capability to track resources, requirements, and patients in support of theater operations. In particular, health service logistics relies heavily on automation, communications-linked medical units, and supporting MEDLOG battalions. Depending on the size of the deployed force, a MEDCOM, medical brigade, or medical group controls medical information management. Arriving with the lead element, units with an automated capability to manage medical information orchestrate both the arrival of medical units in the AO and the interface with other information systems—such as movement and personnel—at all levels.

MASS CASUALTIES

Triage is the evaluation and categorization of patients for treatment and evacuation to facilitate the efficient use of available resources. Primary considerations for

conducting triage include where it will take place and who is available to do it. When large numbers of patients are immediately located at the incident site, triage is best accomplished at the site, This ensures that priority is appropriately given to those patients requiring immediate evacuation to MTFs.

Medical personnel who are qualified in trauma treatment sort mass casualties. They identify each patient by category, indicating the priority of his treatment and the likelihood of his survival. The four categories are minimal, immediate, delayed, and expectant.

Rapid sorting assures that available treatment is directed first toward those patients who have the best chance of survival and earliest return to duty. In a rapidly changing battlefield environment, NBC-contaminated patients are separated from uncontaminated patients as the situation dictates. Triage is conducted in the same manner for contaminated and uncontaminated patients; however, the patient and medical treatment personnel are encumbered by mission-oriented protective posture (MOPP) IV. Medical treatment requires more time because of decontamination procedures. FM 3-5, FM 8-10-4, and FM 8-285 discuss the requirement for supported units to provide manpower for patient decontamination.

HOST NATION

HNS should not be assumed to be immediately available. Therefore, every effort should be made to have HNS agreements in place to accommodate as many requirements as feasible. Attached CA staff augmentation and operational teams provide interface with civil authorities. This interface is coordinated with civilian medical resources (personnel and facilities) for possible treatment of US patients, as well as ensuring a reasonable echelon of care for the local populace. Prenegotiated HNS agreements can greatly assist in the area of fixed facilities, utilities, maintenance, and patient evacuation and can reduce the manpower requirements in the medical force structure. Maximum use is made of HN transportation resources as they become available, especially rail and waterways. Conversion kits should be procured and monitored to ensure their availability for modifying buses, trains, and barges for patient evacuation.

PART THREE

Operational-Level Support

Operational-level support can be a dominant factor in determining the nature and tempo of operations. More than logistics, it furnishes the means to execute the operational and theater strategic concepts. It includes all those CS and CSS functions required to allow the tactical commanders to focus their attention on their tactical missions. Operational-level support encompasses all those actions that aid, protect, or sustain a force, including signal, intelligence and electronic warfare, and civil-military, and psychological operations. The ASCC's over-arching vision of his operational area melds support, combat operations, and MOOTW into an inseparable combination, tailoring support organizations and establishing support relationships in accordance with the ClNC's priorities.

Chapter 8

Signal Support

Signal support is critical to Army forces in war and MOOTW. It and the signal support information architecture provide the operational commander C^2 of his forces during force projection operations and MOOTW. The primary signal support mission is to provide collective, integrated, and synchronized information systems to support warfighting capabilities. The National Military Strategy is continuously changing to accommodate the new realities of the post-Cold-War world. Consequently, the US military and its associated C^4 structure are adjusting to new roles and missions across the full range of military operations.

BATTLEFIELD INFORMATION ARCHITECTURE

The battlefield information architecture consists of an integration of local area networks (LANs), wide area networks (WANs), and battlefield automated systems (BAS). A communications architecture ties the many distributed elements into an integrated, inter operable, and cohesive network. Infrastructure elements and command, control-communications, computers, and intelligence ($C^4$1) capabilities combine to provide a global communications network (see Figure 8-1).

The seamless integration of these systems allows the commander C^2 on the battlefield and supports transparent global C^4I interfaces, nonlinear battlefields, and operational enclaves. These communications means afford the commander and his staff the ability to distribute critical information between higher, lower, adjacent, joint, and multinational forces. Voice traffic and data distribution are the primary methods of passing this information (see Figure 8-2).

SIGNAL SYSTEMS

The quality of the ASCC's decisions will be directly proportional to the quality and timeliness of the information upon which those decisions are based. Responsive and effective

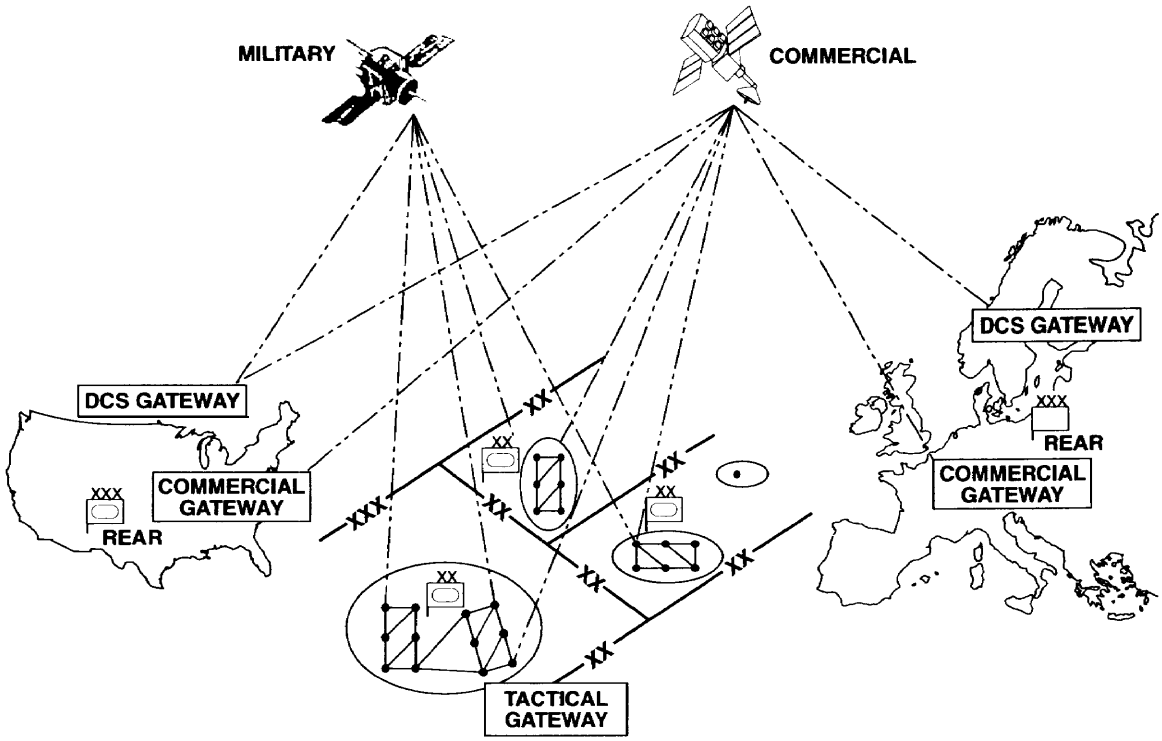


Figure 8-1. Global Communications Network

support operations rely on worldwide assured signal support systems. Seamless signal systems integrate the full spectrum of support functions and are tailored in a manner that provides commanders and other users with timely and relevant logistics and support information. Connectivity out of the theater via gateways can allow much of the distribution management function to be accomplished from CONUS, HNs, or other processing sites, reducing the number and size of facilities in the theater of operations (see Figure 8-3).

The operational-level signal organization elements function under the US Army Information Systems Command (USAISC) and are OPCON to the ASCC. This organization provides—

- Voice and data tactical information services to the theater of operations.
- Out-of-theater access and connectivity to other joint and multinational elements.
- Signal support needed for receiving forces and managing movement of supplies and equipment at airfields, seaports, and warehouses.

To support split-based operations, connectivity-either military or commercial—is provided between CONUS POEs and other manifest activities and PODs in the theater. Communications for ITV and TAV are provided when needed for asset management at the POD to make the logistics system more responsive to the soldiers and the units it supports. FM 11-45 discusses operational-level signal organization support, which includes communications, automation, visual information, printing and publications, and records management.

WARFIGHTER NETS

Corps and division warfighter nets, combining both single-channel satellite and combat net radio (CNR), provide the respective commanders with C^2 connectivity to meet the requirements of the modern battlefield. Each commander is provided the capability to immediately access command posts and

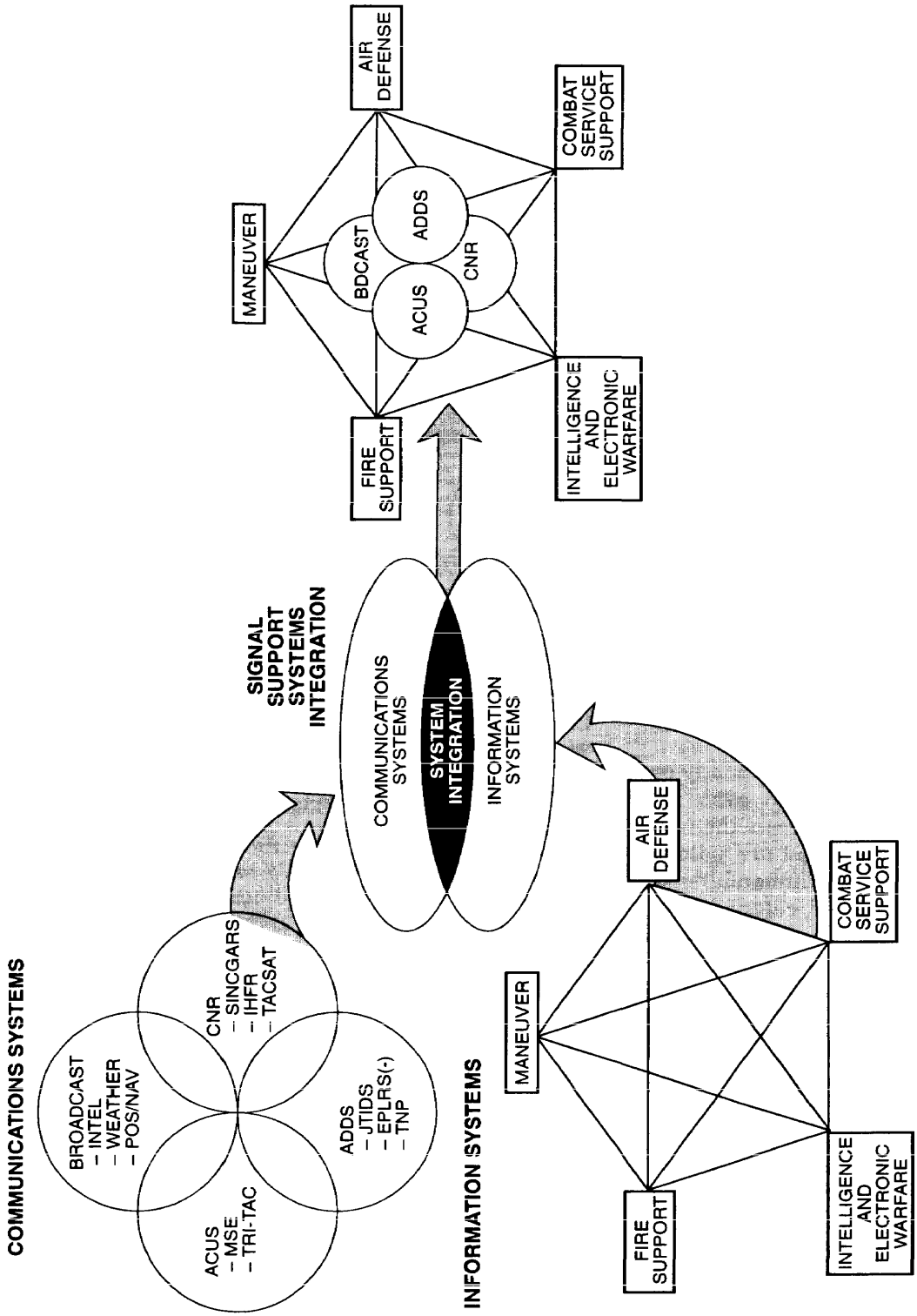


Figure 8-2. Battlefield Information Architecture Integration

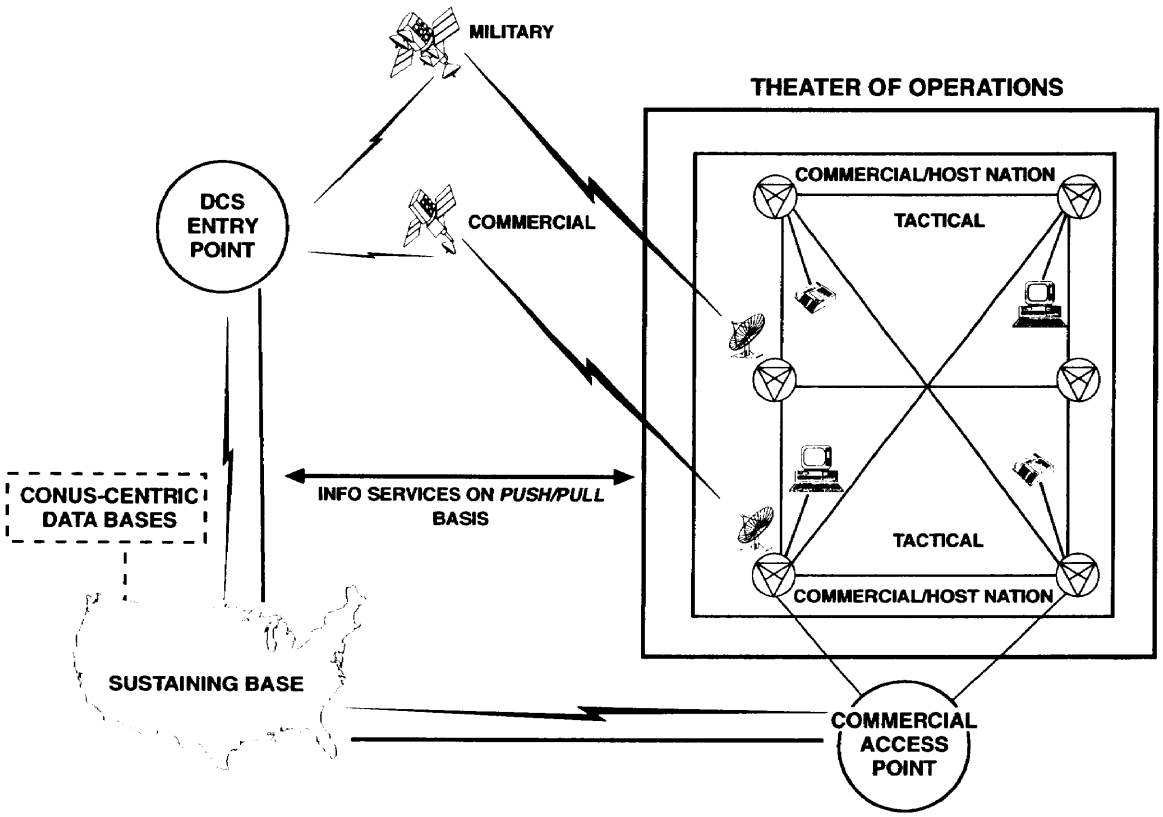


Figure 8-3. Tactical and Strategic Systems Interface

monitor subordinate units' communications. The warfighter net allows the commander to direct operations during critical moments of the battle (see Figure 8-4).

VOICE SERVICES AND DATA DISTRIBUTION

Signal support provides the battlefield commander voice services and data distribution for his user-owned, -installed, and -operated terminal devices. Voice traffic includes user-to-user, conference, and broadcast traffic. Data distribution includes formal (joint message text) and informal (facsimile and electronic mail) record traffic, system-to-system data, and position/navigation (POS/NAV) data. Voice communications use flood search call routing, which allows the caller multiple-path routing through the communications network providing global connectivity. The tactical packet network CPN), which connects LAN users to the global information network, provides data distribution services. Both services are provided via the area common-user system (ACUS) and are connected to the system by the local tactical switchboard (see Figure 8-5).

COMMUNICATIONS FOR CSS

Responsive and effective CSS operations rely on communications. CSS activities will be provided access to the ACUS—a terrestrial multichannel radio network—through various switch configurations located with the forward deployed element. This access gives the CSS element connectivity to Automatic Digital Network (AUTODIN), DSN, and the Defense Data Network (DDN). The CSS element is also provided the capability to interface with joint and international systems. To permit STAMIS connectivity to the ACUS, the CSS automated information system interface (CAISI) interfaces the STAMIS and the local switch, providing a CSS data flow.

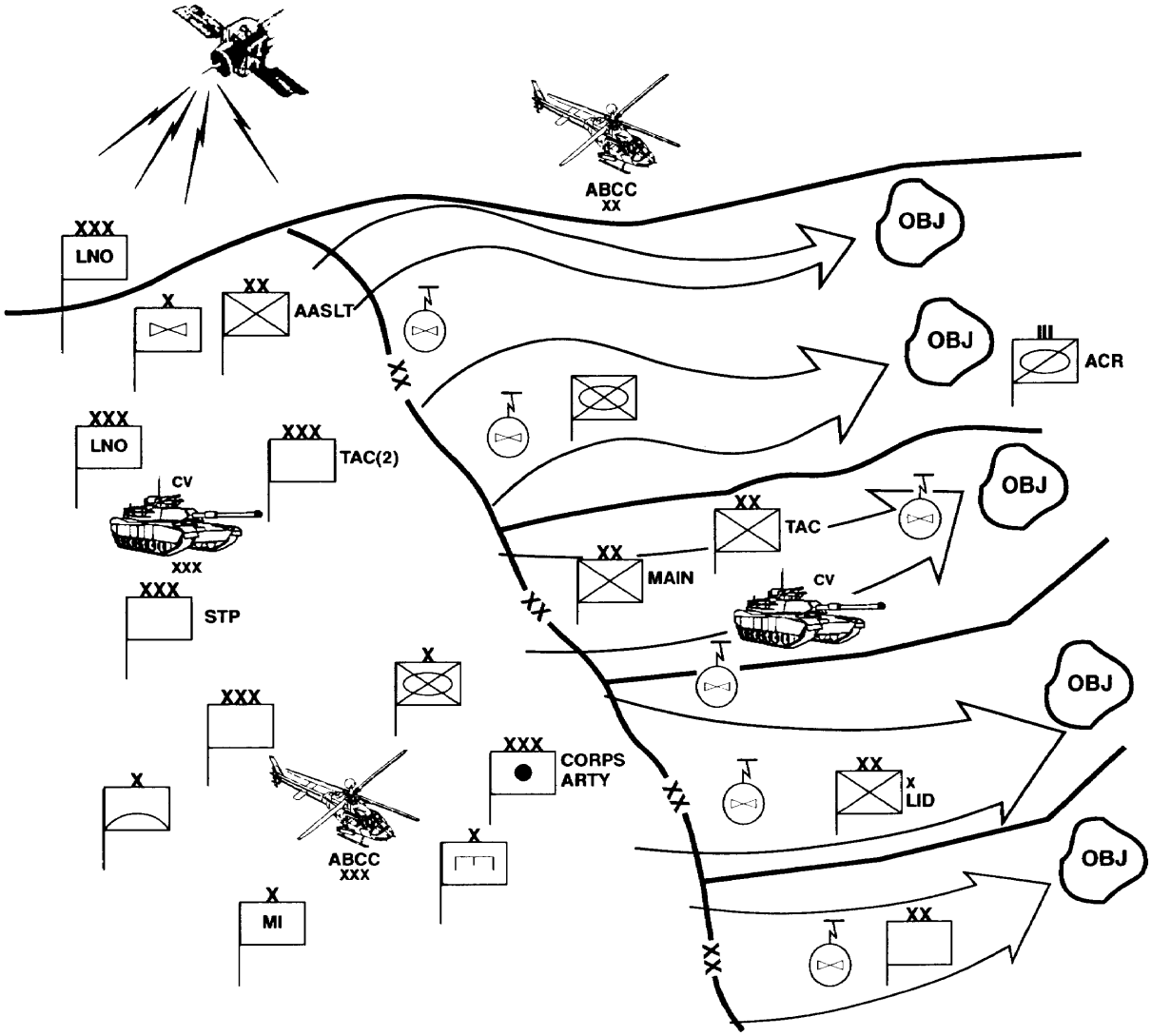


Figure 8-4. Corps Commander Warfighter's Net (TACSAT) Data and Voice Services

SUPPORT TO FORCE PROJECTION

Throughout all phases of force projection opera tions—predeploy merit, deployment, entry, operations, postconflict, and redeployment—signal support enables effective battle command. By using satellite communications and other means, operational-level signal elements make split-based operations possible. The signal support architecture supports global deployability, connectivity, and tactical agility. Signal units are as strategically deployable and as tactically mobile as the forces they support.

PREDEPLOYMENT

Prior to deployment, interface with the strategic- and sustaining-base communication systems is critical. In the early stages of crisis development, these systems are the primary means for predeployment communication. As potential crisis situations develop, the collection and analysis of intelligence information intensifies, and intelligence products are provided to operational commanders for planning purposes.

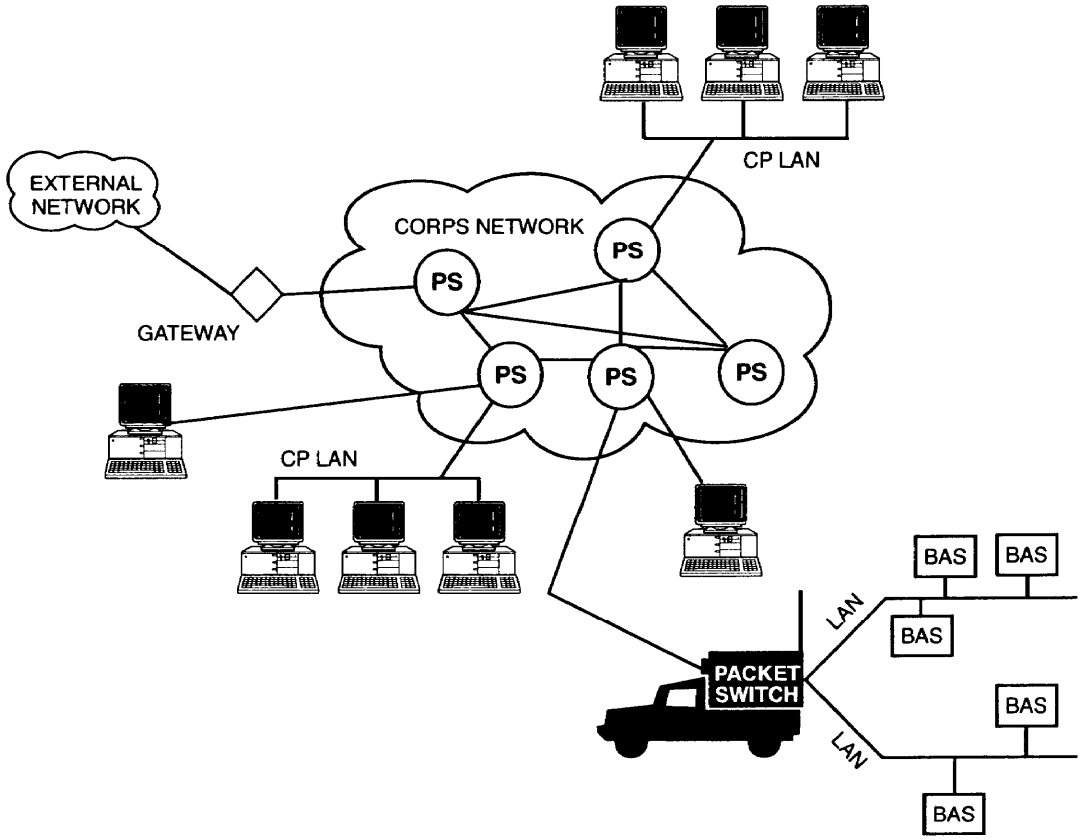


Figure 8-5. Tactical Packet Network

DEPLOYMENT

C^4I between the sustaining base, the deploying forces en route, and ground forces is critical. From the outset of deployment operations, single-channel TACSAT and commercial satellites are included in the signal support package to support C^2.

ENTRY

The requirements for entry operations will vary depending on METT-T. Accordingly, signal support assets are tailorable to meet mission requirements and expandable once deployed. The power projection for Army C^3 (Power PAC3) company and Contingency Communications Package/Light Contingency Communications Package provide entry-operations communications capabilities. Both support split-based operations. As the force buildup continues, signal support will expand services and coverage. This expansion will be aided by the use of existing HN information systems and commercial information services to the extent possible to supplement military systems (see Figure 8-6).

OPERATIONS

As the operations phase begins, maneuver units disperse in tactical assembly areas. Initially, limited communications are established for C^2, intelligence, and CSS. During the development to the operational area, the ACUS is established to handle the large amount of voice and data communications traffic produced by force buildup. Also, multichannel satellite communications (range extension signal assets) provide communications throughout nonlinear battlefields (see Figure 8-7).

The initiation of offensive maneuver accelerates the tempo of operations and places

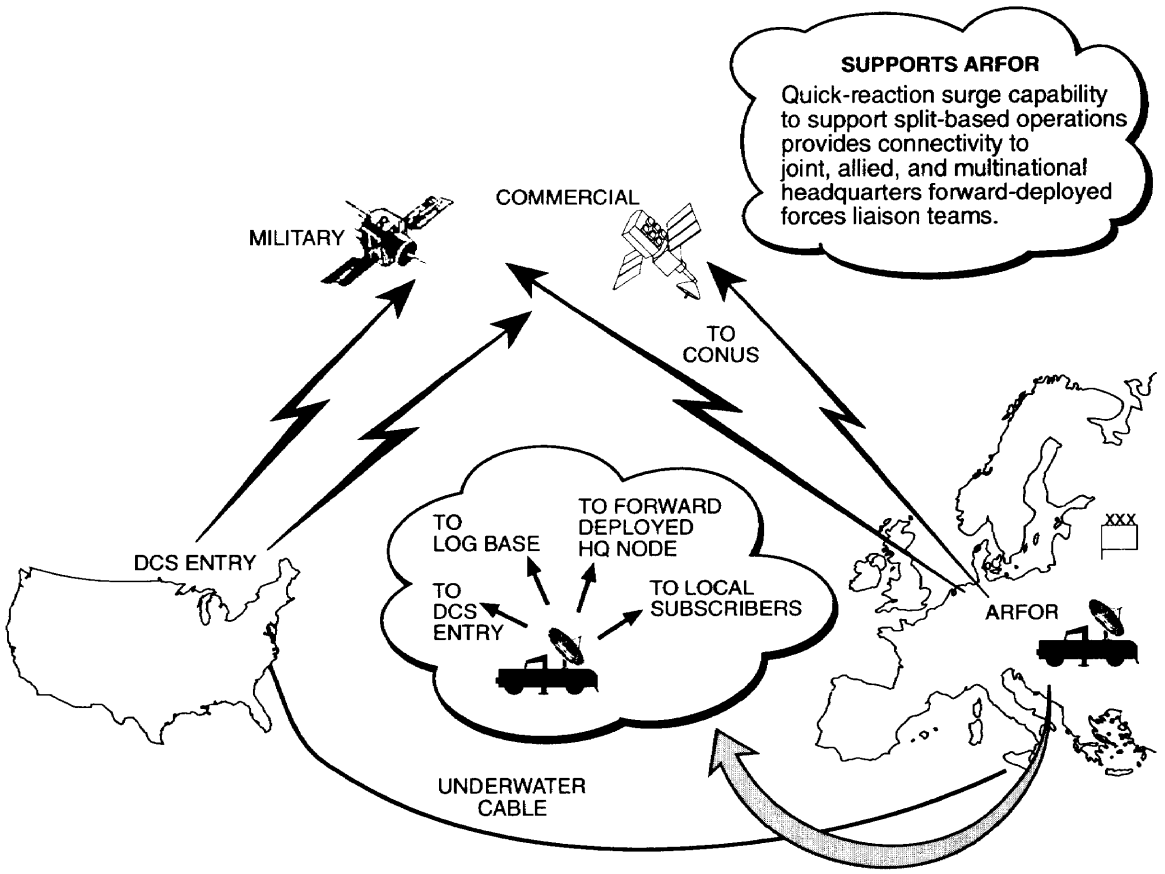


Figure 8-6. Entry Operations Signal Support (Power PAC3)

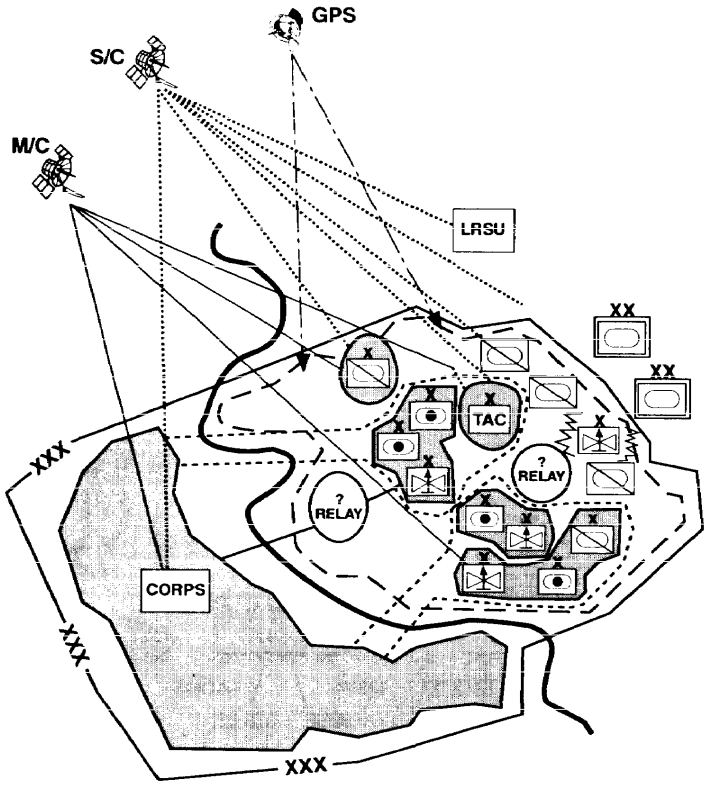
new demands on the ACUS to keep up with the rapidly moving forces. Corps and division warfighter nets provide C^2 capability over extended ranges for combat units. Communications payloads in unmanned aerial vehicles (UAVs) serve as relays to extend the range of ground communications and may function as surrogate satellites to supplement the capabilities of space platforms. Satellite systems will be used to broadcast intelligence and targeting information directly to the maneuver brigade commander's level (see figure 8-8).

POSTCONFLICT

Postconflict operations focus on restoring order and minimizing confusion following the cessation of open conflict while reestablishing the HN infrastructure. Signal support will continue to provide access to the DDN and the Defense Communications System (DCS).

REDEPLOYMENT

Communications assets will be available to support redeployment and will be phased out of the objective area as the situation permits. Signal support plays an important role in redeployment operations. Redeploying units, CSS activities, assembly areas, airports, seaports, and sustaining base activities will have access to communications to coordinate redeployment. CSS information flows to the rear from forward areas, with much of this information being passed to sustaining base activities via strategic and commercial communications systems (see Figure 8-9).



SIGNAL SUPPORT

EXPAND SIGNAL SUPPORT TO UNITS AND AREAS REQUIRED BY SELECTED ELEMENTS

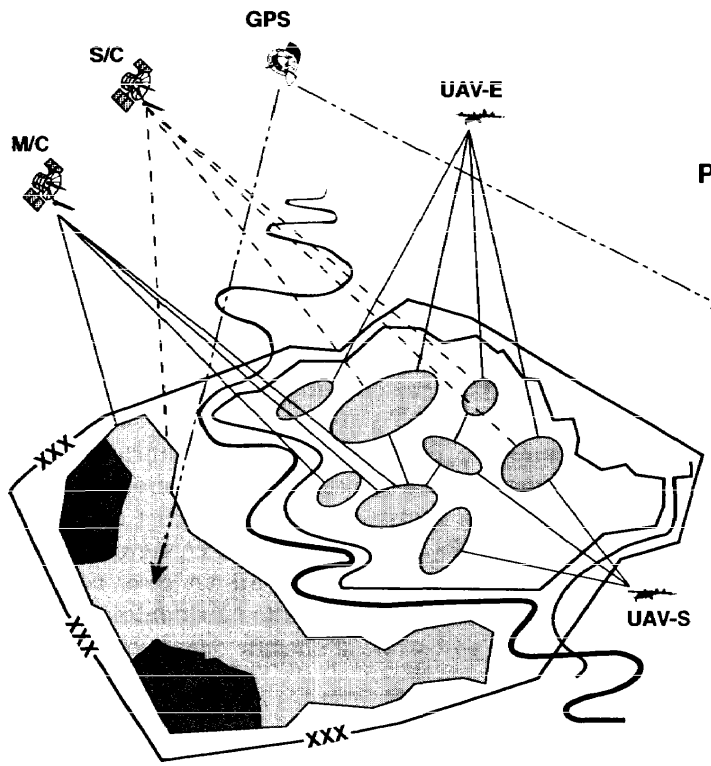
- Push MSE out to critical units M/C covered by mobile RAUs.
- Use range extension (multichannel TACSAT and TROPO) to provide connectivity to units and enclaves.
- Provide extensive data transport for sensors-to-weapons systems.
- Combat net radio vital to brigade and below C^2.

KM: 0 50 100 150

LEGEND

- Area of operation
- Detected zone
- Battle zone
- MSE network
- **M/C** – Multichannel
- **S/C** – Single channel

Figure 8-7. Operations Signal Support



SIGNAL SUPPORT

PROVIDE TIMELY COMMUNICATIONS AND DECISION SUPPORT

- MSE network built in maneuver forces' areas of operations.
- CNR is primary means of C^2 for maneuver forces, brigade and below.
- EPLRS will support mobile forces with data and POS/NAV.
- GPS supports POS/NAV requirements.

LEGEND

- Area of operation
- Detected zone
- Battle zone
- Enclave zone
- Vacated by corps

Figure 8-8. Offensive Maneuver Signal Support

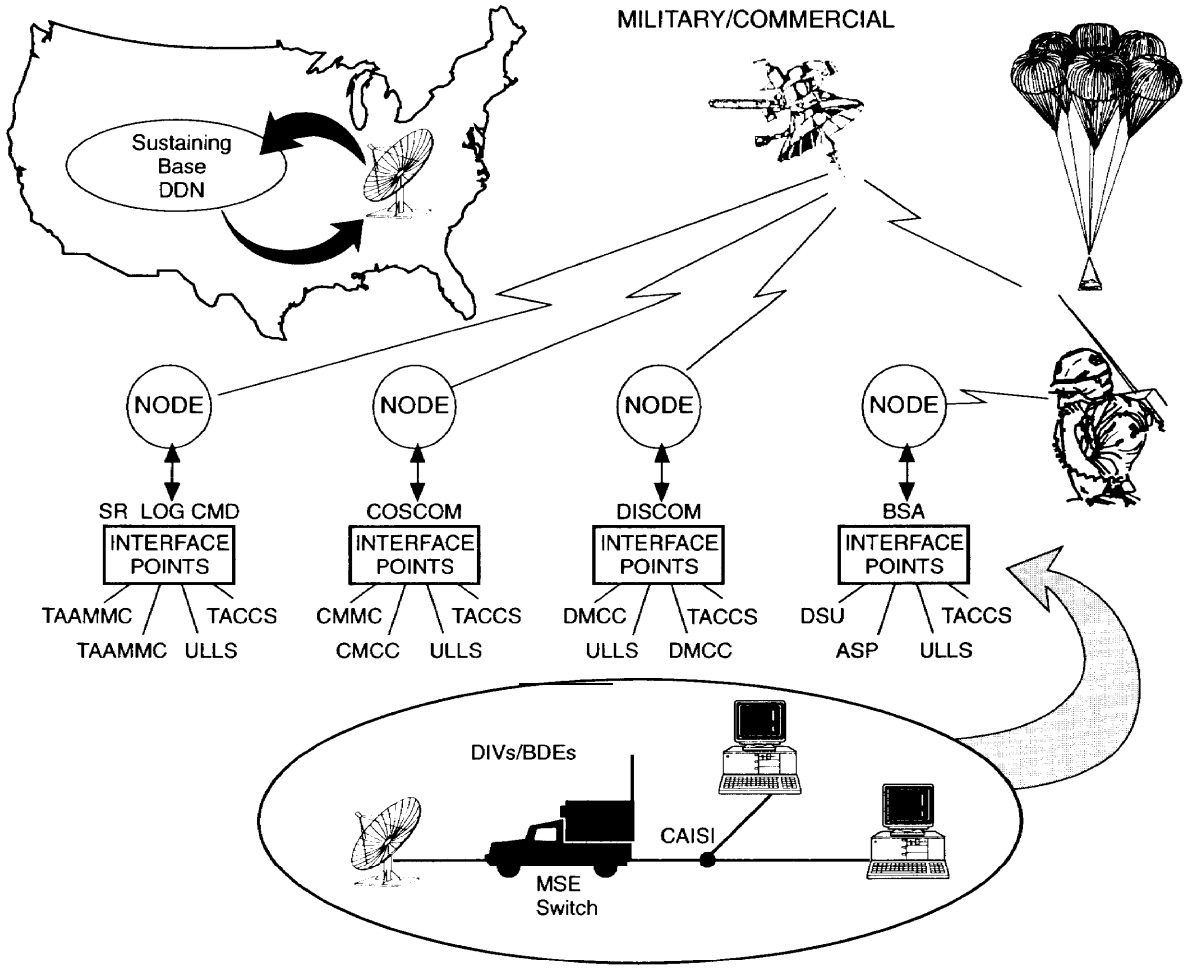


Figure 8-9. Communications

SUPPORT TO MILITARY OPERATIONS OTHER THAN WAR

The Signal Corps has assumed new and important roles under the Army operations concept promulgated by FM 100-5. One of the new and significant roles is signal support in MOOTW. This role includes support for all measures that improve HN communications infrastructures. Since we may have to rely on these facilities during force projections operations, they should be compatible with US Army tactical communications systems (see Figure 8-8). To accomplish this role, signal units provide direct assistance abroad and at home by restoring commercial communications networks destroyed during conflict or natural disaster. In support of MOOTW, signal support forces will be tailored to provide the information requirements to accommodate the nature and scope of specific operations.

Chapter 9

Operational Intelligence and Electronic Warfare

Operational intelligence is the link between strategic and tactical intelligence. Commanders use IEW support to anticipate the battle, understand the battlefield, and influence the outcome of operations. They also use it to support force protection. IEW enables commanders to focus, leverage, and protect their combat power and resources. CSS commanders use IEW to identify the vulnerability of CSS sites and operations to enemy action, in both forward and rear areas. They also use intelligence to anticipate friendly logistics requirements and to locate routes and sites for CSS operations. Like logistics, operational IEW functions occur at theater level.

THE INTELLIGENCE AND ELECTRONICS WARFARE MISSION

The Army intelligence mission is to provide timely, concise, accurate, relevant, and synchronized IEW support to tactical, operational, and strategic commanders across the range of military operations. The theater support commander uses the intelligence battlefield operating system (BOS) to support his intelligence requirements. The intelligence BOS is seamless and includes all levels of intelligence, from tactical to national. It is a flexible, tailorable, multiechelon, and multidiscipline architecture of procedures, organizations, and equipment that responds to commanders' priorities and direction. Military intelligence personnel accomplish their mission by performing six primary tasks:

- Providing indications of hostilities intelligence and warning.
- Performing IPB.
- Performing situation development.
- Supporting target development and targeting.
- Performing BDA.
- Developing force protection intelligence.

FORCE PROTECTION

The commander also uses the intelligence BOS to support force protection. It is active and proactive, identifying, locating, and targeting an enemy's ability to target and affect friendly forces. With this intelligence, the commander decides which countermeasures he must use to shield his intentions, present false images to the enemy commander, and protect his force. Force protection intelligence-

- Identifies and counters enemy intelligence-collection capabilities.
- Assesses friendly vulnerabilities from the enemy's perspective.
- Identifies the enemy's perception of friendly centers of gravity and how he will attack or influence them.
- Identifies potential countermeasures to deny enemy access to friendly critical areas.
- Contributes to threat avoidance once the risk is identified.
- Enables the commander to plan for both passive and active OPSEC, deception, and other security measures.

COMBAT SERVICE SUPPORT

IEW organizations provide the intelligence that is used to determine resource requirements in preparation for war and MOOTW. BDA is useful in identifying the need for additional resources. The intelligence BOS supports force protection from the factory to the end user on the battlefield.

COUNTERINTELLIGENCE

CI counteracts foreign intelligence and terrorist threats to the friendly force. Its specialty is support to force protection. CI supports force protection by conducting

activities categorized under the four functional areas of investigations, operations, collection, and analysis and production. These activities are conducted during peacetime and war. For additional information, see FM 34-60.

REAR AREA OPERATIONS

IEW contributes to the rear battle by assisting in identifying, analyzing, wargaming, and early warning of potential threats to the friendly rear area and identifying terrain that supports friendly rear area operations.

THE TENETS OF INTELLIGENCE AND ELECTRONIC WARFARE

The tenets of Army military intelligence and electronic warfare are:

The commander drives the intelligence effort. He focuses the intelligence system by clearly designating his priority intelligence requirements, targeting requirements, and priorities. He ensures that the intelligence BOS is fully employed and synchronized with his maneuver and fire support BOSs. He demands that the intelligence BOS provide the intelligence that he needs, when he needs it, and in the form he needs.

Intelligence must be synchronized with operations. The CINC's intelligence staff synchronizes intelligence collection, analysis, and dissemination with operations to ensure the commander receives the intelligence he needs, in the form he can use it, in time to influence the decision-making process. Intelligence synchronization is a continuous process that keeps IEW operations tied to the commander's critical decisions and concept of operations.

Intelligence must receive broadcast dissemination. Broadcast dissemination of intelligence is the simultaneous broadcast of near-real-time intelligence from collectors and processors at all echelons. It permits all commanders at all echelons to simultaneously receive the same intelligence, thereby providing a common picture of the battlefield. It allows commanders to skip echelons and pull intelligence directly from the echelon broadcasting it. The analysis and control elements (ACES) at brigade, division, corps, and theater form a seamless bridge linking the commander with higher and lower echelons. They are the commander's primary organization for pulling information from the broadcast system. The theater commander must ask specific questions to focus his intelligence team. Specific intelligence requirements act as filters between the commander pulling intelligence and the vast amount of information available. To efficiently answer the commander's questions, the operational-level ACE element staff must know specifically where to pull the desired information from in the broadcast system.

Intelligence operations are split-based. Split-based intelligence opertions provide deploying tactical commanders with high-resolution intelligence until their organic intelligence-collection assets are employed and augment their organic intelligence production. Split-based intelligence operations employ collection and analysis elements from all echelons, national to tactical, in sanctuaries from which they can operate against the target area.

Intelligence must be tactically tailored. In force projection operations, the commander tactically tailors IEW support for each contingency based on the mission and availability of resources. He must decide which key intelligence personnel and equipment to deploy early and when to phase in his remaining MI assets.

THE INTELLIGENCE AND ELECTRONIC WARFARE FORCE STRUCTURE

The operational-level IEW force structure is part of the total IEW architecture within each theater. The intelligence staff of each theater is specifically tailored to the needs of that theater. All theater intelligence staffs perform the same basic IEW staff functions and tasks. Army IEW operators at the operational level receive their directional

guidance from the theater commander. Each mature theater has an operational IEW organization under the command of Headquarters, USAINSCOM, and under the OPCON of the respective theater commander during peacetime. During conflict, they revert to the command of the theater commander.

The deployable IEW organization at the operational level is scalable. It can conduct split-based operations in force projection missions by early deployment of the small, highly technical deployable intelligence support element (DISE). The DISE is a conduit for theater- and national-level intelligence. The size and capabilities of the DISE can be changed with the scope of the supported operation. The operational-level IEW organization serves as a C^2 headquarters for subordinate and attached MI elements. The operational-level ACE is the principal organization for producing all-source intelligence. It controls, manages, tasks, processes, analyzes, synthesizes, and disseminates intelligence. It supports OPSEC and deception, sensor cueing, target development, and situation development. The ACE coordinates with and provides connectivity to US national, joint, and multinational intelligence sources. FM 34-37 addresses operational-level IEW operations.

Chapter 10

Civil-Military and Psychological Operations

The Army considers CA and PSYOP forces as part of SOF. Therefore, these forces have been placed under the command and proponency of the US Army Special Operations Command (USASOC), along with special forces (SF), Rangers, and Army special operations aviation. This chapter, however, focuses on civil-military and psychological operations and their support of CSS operations.

CIVIL MILITARY OPERATIONS

CMO involve the decisive and timely use of military capabilities to perform activities ranging from support to combat operations to traditionally nonmilitary roles assisting countries in bringing about political, economic, and social stability. At the tactical level, CMO are the activities military units conduct to enhance military effectiveness, to support national objectives, and to reduce the negative aspects of military operations on civilians.

CA activities are an integral part of CMO. They range from advice and assistance to civilian authorities and the civilian population in their relationships with military forces to actions that promote the welfare, stability, and security of friendly governments and their populace. They are characterized by the application of functional specialties in areas normally the responsibility of indigenous governments or civil authorities. CA activities require intensive planning and flexibility, maximum adaptability, and use of indigenous political and social structures and resources.

Successful CA operations will help to assure civil or indigenous understanding of, and compliance with, controls, regulations, directives, or other measures taken by commanders to accomplish the military mission and attain US objectives. They must be closely coordinated with the US country team in the HN. For maximum effectiveness, CA personnel, elements, or forces must plan and conduct CA operations.

CMO MISSION ACTIVITIES

FM 41-10 describes CMO mission activities—populace and resources control (PRC), foreign nation support (FNS), humanitarian assistance (HA), military civic action, and civil defense (CD). They are summarized here to illustrate how closely they are tied to support functions and capabilities.

Populace and Resources Control

PRC involves those activities that provide security to the populace, deny personnel and material to the enemy, mobilize the population and material resources, and detect and reduce the effectiveness of enemy agents. Populace control includes curfews, movement restrictions, travel permits, registration cards, and resettlement of villagers. Resource control measures include licensing, regulations and guidelines, checkpoints—for example, roadblocks—ration controls, amnesty programs, and inspection of facilities.

Two subdivisions of PRC operations are dislocated civilian operations and NEO. Dislocated civilian operations are a combat support task intended to minimize civilian interference with military operations and to protect civilians from combat operations. NEO, conducted under the direction of the Department of State, remove threatened US citizens from locations in a foreign nation and or HN to safe areas or to the United States. In either operation, the use of HN, multinational, and voluntary organizations lessens the need for military resources.

Foreign Nation Support

FNS refers to the identification, coordination, and acquisition of HN or third country resources to support military forces and operations. These resources include

supplies, material, and labor that are not readily available to the military force by normal acquisition means. Purchase of these resources also adds to the local populace's trade and employment opportunities.

Humanitarian Assistance

HA encompasses short-range programs such as disaster relief, NEO, HA/CA, nation assistance, and dislocated civilian operations aimed at ending or alleviating present human suffering. HA is usually conducted in response to natural or man-made disasters, including combat. HA is designed to supplement or complement the efforts of HN civil authorities or agencies that have primary responsibility for providing HA.

Military Civic Action

Military civic action projects are designed and intended to win support of the local population for government objectives and for the military forces in the area. Military civic action employs mostly indigenous military forces as labor for short-term projects. Projects must conform to the national plan and fit the development program for the area. Examples of these projects are farm-to-market roads, bridges, short-range education programs, basic hygiene, medical immunization programs, and simple irrigation projects.

Civil Defense

CD involves those measures taken to protect the populace and its property from harm in the event of a natural or man-made disaster. It is primarily the responsibility of HN government agencies. Military civic action projects designed to support CD include assisting the populace in building new shelters or preparing existing facilities for emergency occupation; planning and improving evacuation routes; and any other measures that would save human life, prevent human suffering, or mitigate major destruction or damage to property.

CA FUNCTIONAL AREAS

CA forces maintain capabilities to perform in a number of functional areas. They capitalize on these skills when planning and conducting CA activities and providing support to COCOM requirements. Functions interconnect to a certain extent to prevent exclusive interest within any given functional area. Some of them require specialists who are proficient in more than one skill. As an example, the food and agriculture function may require knowledge associated with forestry, manufacturing, processing, storage, and distribution. CA activities are performed in four functional areas: government, economic skills, public facilities, and special functions.

Government

Government functions relative to CMO include:

- Public administration—Relevant to operations and/or use of civil agencies and organizations.
- Public safety—Relevant to operations and/or use of civil law enforcement, security, and emergency services and facilities.
- Public health—Relevant to operations and/or use of civil medical facilities, management of patients, disease control, and other preventive health measures or systems.
- Labor—Relevant to operations and/or use of civil work force agencies and personnel.
- Legal—Relevant to operation of foreign judiciary and legal systems, to matters related to international law, and to US laws governing military support to federal, state, and local authorities.
- Public welfare-Relevant to operations and/or use of civil relief agencies and other organizations providing supplies and other support to the civil population.
- Public finance-Relevant to operations of civil budgetary agencies and to formulation and/or implementation of associated monetary fiscal policy.
- Public education—Relevant to operations and/or use of civil education systems and programs.
- CD---Relevant to operations and/or use of civil emergency welfare and relief services; coordinated civil-military public safety; NBC attack warnings; casualty treatment and evacuation measures; and disaster relief and recovery actions.

Economics

Functions relative to the area of economics include:

- Civilian supply—Relevant to coordination, acquisition, and distribution of civil sector resource support for essential military needs and military provisions essential for minimum civil population needs.
- Food and agriculture—Relevant to operation of civil agricultural training, crop improvement, and overall food management and production.
- Economics and commerce-Relevant to:
- Operation and/or use of civil government price and commodity controls, rationing, and key industries.
- Assessment of existing economic and commercial structure and its effect on planned military operations.
- Rehabilitation and/or reconstruction of the economic commercial infrastructure.
- Property control—Relevant to operations, policies, and procedures for use and/or disposition of real civil property, including special consideration or protection.

Public Facilities

Functions relevant to public facilities include:

- Public works and utilities—Relevant to operations and maintenance of civil public works and utilities such as gas, waterworks, and sewage or refuse.
- Public communications—Relevant to operation and management of civil, government, and private postal services, telephone, telegraph, radio, television, and public warning systems.
- Public transportation—Relevant to operations and/or use of available civil transportation assets, including rail, highways, ports, and airfields.

Special Functions

Special functions include:

- Dislocated civilians—Relevant to operations and care and control measures—for example, shelter, screening, evacuation—to facilitate military operations and meet humanitarian requirements.
- Cultural affairs—Relevant to policies and procedures for safeguarding significant cultural traditions and properties.
- Civil information—Relevant to:
- Development of effective indigenous informational institutions and programs.
- Support to US informational programs, including formulation, coordination, and dissemination of required notices or proclamations to the civil population.
- Arts, monuments, and archives for the identification, recovery, appraisal, safeguarding, and disposition of official and nonofficial public documents, records, and cultural properties.

CA ASSETS

As outlined in Joint Pub 3-57, the CA assets available to combatant commanders to achieve US political, military, economic, or psychological objectives are active (AC) or reserve component (RC) CA forces organized, equipped, or trained to carry out missions in support of CA activities; CA personnel assigned or attached to combatant commands; other RC personnel possessing functional specialty skills applicable to CA activities in peacetime, contingencies or crisis response, or regional conflict operations. Although not trained in functional specialty skills for CA operations, other DOD forces and personnel—such as engineer, medical, dental, veterinary, MP, communications, logistics, and transportation teams and/or units-complement CA assets in conducting CA activities and CMO and will routinely provide significant support for them.

CA CAPABILITIES

CA organizations in the US Army are oriented to specific regions of the world. As such, they provide experience and expertise on the culture and languages in the area of operations. FM 41-10 describes these organizations fully. CA-specific missions and logistics-related capabilities are summarized here.

CA Command

The senior CA unit in a theater is normally a CA command aligned with the ASCC. The CA command plans, manages, and conducts CA

operations. It may command attached CA units and provide staff support to a special operations command (SOC), other component services, and joint theater staff as required. Its capabilities include-

- •Providing interface between national civil authorities and US military forces.
- •Establishing procedures and processes for cataloging available indigenous resources, facilities, and FNS.
- •Establishing procedures to coordinate US requirements for FNS.
- •Establishing procedures and processes for minimizing civilian populace interference with military operations.
- •Establishing procedures for advising and assisting the commander concerning his legal obligations and moral considerations.
- •Recommending theater policy for civic action, civil assistance, and civil administration activities and missions.
- •Providing technical expertise in the CA functional specialties to subordinate units on an as-needed basis.

CA Brigade

The CA brigade's mission is to plan, manage, and conduct CA operations in support of an ASCC. It may command attached CA units and provide staff support to other component services and joint theater staff as required. If it is the senior CA unit in a theater, it is aligned with the ASCC and assumes the duties of a CA command. Its capabilities include-

- •Providing CA units to support operational- and tactical-level operations in the theater.
- •Providing interface between local civil authorities and US military forces.
- •Providing procedures for advising and assisting the commander concerning his legal obligations and moral considerations.

CA Battalion (GP)

The CA battalion (GP) plans and conducts CA operations in support of a division, COSCOM, or an area support group (ASG). It provides public administration, dislocated civilian, supply, public communications, public health, CD, public works and utilities, and language assistance. It supports planning and coordination of CA and FNS operations for its supported unit(s). Its capabilities include--

- •Providing CA units and elements to support divisions, brigades, and CSS organizations, installations, and facilities.
- •Identifying and coordinating US requirements for available indigenous resources, facilities, and FNS.
- •Developing and implementing—as needed—plans to support the local civilian populace with local resources to lessen the US military resource commitment.
- •Minimizing local populace interference with US military operations.
- •Advising and assisting the commander to meet legal obligations and moral considerations.
- •Planning MC measures and coordinating HA.
- •Advising and assisting local CD officials.

CA Battalion (FID/UW)

The CA battalion (FID/UW) plans, organizes, and conducts CA operations in support of FID and UW missions. Designed to support US Army SF, it maybe assigned to the ASCC, theater SOC, headquarters SF group, or headquarters CA command. Its capabilities include-

- •Training, advising, and assisting SF detachments and indigenous personnel on the planning and conduct of PRC and the organization of auxiliary, civic action, and political warfare in support of UW operations.
- •Providing CA technical advice and assistance to SF.
- •Providing detachments to support indigenous government agencies with PRC, civic action, and civil assistance in support of FID operations.

CA Battalion (GS)

The CA battalion (GS) plans and conducts CA operations in support of other special operations. It is assigned to the theater army, headquarters SF group, headquarters CA

command, JTF, or joint special operations task force (JSOTF) as required. Its capabilities include—

- C^2 in multiple theaters of CA units assigned or attached to US joint, service, or functional component and multinational commands for contingency/crisis.
- Facilitating relationships among US military forces, civil authorities, and people of the nations in which the military forces are operating.
- Planning, training, and teaching FN military forces to execute CA-type activities supporting military civic action, PRC, CD, community relations, and other programs, as required.
- Identifying and assisting in acquiring available local resources, facilities, and support to enhance the commander's ability to accomplish his mission.
- As required, providing in-country support and assistance to the US country team and other US government agencies, for example, US Agency for International Development (USAID).

CA CSS ACTIVITIES

Combatant commanders establish basic direction and procedures for civilian supply operations, including determination or estimates of initial military force requirements and the availability of civilian sector resources. When operations commence or US military forces are present, the commander exercising CA authority is responsible for providing to the combatant commander recommendations and information relevant to resource procurement in the civilian sector. Commanders can determine requirements for support either to or from the HN, in part based on that information. CA activities may require exercise of the following CSS activities:

- Arranging for civilian resource support to military forces in such areas as subsistence, water, billeting, cargo handling, transportation, limited spare parts, emergency medical support, and both skilled and unskilled labor.
- Facilitating FNS and contracting or commercial support to US and/or friendly forces in multinational operations.
- Arranging for support to civilian population and agencies from military stocks and organizations.
- Assisting, supervising, or controlling self-supporting civilian sector operations.

CA CSS activities should not be confused with internal support requirements. CA organizations receive CSS through established channels in the same manner as other military units.

HOST NATION SUPPORT

Implementation of HNS plans will be based on capabilities, reciprocal arrangements, national policy, and international law pursuant to DOD Directive 5100.69 and AR 190-8. The use of local resources, consistent with international law and US policies with respect to local economic conditions, may be essential to support US military, economic, and political objectives. Property and local facilities that may be used include land, buildings, right-of-ways, piers, docks, bridges, railways, and communications systems, as well as the machinery and tools required for their operation. To reduce the likelihood of civilian resistance or hostility, military forces should be properly alerted to the importance of avoiding illegal destruction of property and the exploitation of the civilian population. Prescribed acquisition procedures will be followed at all times.

SUPPORT TO CIVIL REQUIREMENTS

Military supply of items necessary for the relief of civilian distress or the rehabilitation of the economy or infrastructure of a country in which military forces are present is primarily a concern of the commander's logistics division, Managing the distribution to civilians is usually a function of CA forces. US-HN agreements will normally govern supply or other logistics support for nation assistance operations as part of overall economic aid programs. The logistics division will coordinate this support with a variety of DOD commands and US government agencies. Provision of

relief supplies to civilian populations will be limited to only the essentials needed to prevent disease, starvation, or such unrest as might interfere with military operations. Supplies for civilian relief or economic aid may be procured from military stocks, purchases within the United States, offshore procurement, local resource procurement, captured stocks, and the contributions of voluntary agencies. The determination of requirements for such military provisions or supplies remains a staff responsibility. It is usually exercised through organic or attached CA forces.

PSYCHOLOGICAL OPERATIONS

PSYOP are operations that convey selected information and indicators to foreign audiences to influence their emotions, motives, and objective reasoning. Their ultimate purpose is to induce or reinforce foreign attitudes and behavior favorable to the originator's objectives. PSYOP are a vital part of the broad range of US political, military, economic, and informational activities.

PSYOP activities, subject to US and international law, have certain legal, political, and moral implications. Bilateral defense treaties and status of forces agreements usually include measures concerning the signatories' conduct of PSYOP. Commanders employing PSYOP assets must be familiar with the risks and implications of those operations.

PSYOP RESPONSIBILITIES

Army PSYOP units support other military units or US government agencies in reaching US national objectives. Their primary responsibilities are to-

- Assess the psychological impact of military operations.
- Advise the military commander or the DOD mission director on psychological action programs.
- Develop and conduct PSYOP programs supporting military operations.

PSYOP units may support other military units in a variety of ways. They may support a commander's information and awareness program or other mission-oriented activities, such as disaster relief. In such cases, the commander must clearly convey that PSYOP assets are being used in a dissemination role only, not to project a PSYOP message.

PSYOP APPROVAL

The combatant command CINC develops PSYOP campaign plans during peacetime and war to support national goals in his region. During peacetime, he coordinates his campaign plans with other pertinent government agencies and forwards the plans to the NCA for approval prior to execution. During war, the CINC has final approval authority. If he sees fit, he may delegate approval authority in full—all PSYOP activities—or in part—for example, PSYOP products only—down to a JTF commander or the senior PSYOP commander in the theater. PSYOP personnel at all levels are charged with ensuring that all PSYOP activities conducted . in a theater adhere to the CINC's approved PSYOP campaign plan.

PSYOP SUPPORT TO CONVENTIONAL OPERATIONS

PSYOP forces are regionally oriented and can be called upon to provide area expertise to deployed commanders. The senior PSYOP headquarters in a theater, known as the joint PSYOP TF, coordinates all PSYOP activities in support of conventional operations in the theater. Properly planned and coordinated PSYOP can enhance the success of conventional operations across the range of military operations.

Before Hostilities

PSYOP can persuade target audiences that engaging in war or warlike activities may not be in their best interest. Activities and actions that may take place could include media broadcasts, national and allied political pronouncements and conferences, and economic sanctions. Military activities include show-of-force posturing and troop alerts.

Just Before Hostilities

PSYOP prepare hostile, friendly, and neutral foreign target audiences for the introduction of US forces into a potential AO. These preparatory programs support US strategic actions by reducing the public's interference with US deployment.

During Hostilities

PSYOP support the tactical commanders' operations through surprise, deception, and other actions that undermine the opponent's morale and will to fight. They also assist CA efforts to minimize interference with military operations.

After Hostilities

PSYOP efforts to create a favorable impression of US actions include publicizing US troop withdrawal plans and supporting the public's reorientation and education about the emerging new political environment. PSYOP also supports consolidation operations by—

- Organizing populated areas, using information designed to calm the fears of the populace, prevent panicky movement, and create a state of mind conducive to willingly accepting imposed restrictions and controls. These measures reduce the number of troops required for population control.
- Controlling the flow of dislocated civilians. By publishing and broadcasting instructions, PSYOP units assist the commander in keeping his main supply routes clear and his LOC open.
- Assisting in publicizing labor needs among the civilian populace and in directing potential workers to appropriate labor offices.

PSYOP SUPPORT TO LOGISTICS

PSYOP support to logistics is somewhat limited. In addition to helping keep LOC open, PSYOP assets can conduct information programs designed to publicize CA-coordinated civic action projects in an AO. Medical and engineer units participating in these projects can use PSYOP products to publicize information that would enhance the effectiveness of their mission. For example, PSYOP personnel can use loudspeaker broadcasts, leaflets, and periodicals to inform the local populace of road *or* bridge closures, times and locations for inoculation programs, and other such HA or military civic action activities.

Coordination for PSYOP support to logistics is submitted through operations channels. The PSYOP information program must conform to the ClNC-approved PSYOP campaign. The JPOTG joint PSYOP task group/TF will determine the priority of such information programs in relation to other PSYOP operations. See FM 33-1 for more information.

Chapter 11

Engineer Operations

An adequate sustainment base is essential for the success of any operation. The Army's ability to marshal, transport, and distribute large quantities of material and to maintain assigned personnel and equipment can mean the difference between victory and defeat in conflict or war. The concept of material need in large quantities applies also to MOOTW, where the need for large quantities of Class IV force protection, obstacle, and force bed-down construction materials is significant. Establishing a theater sustainment base depends greatly on the extent and nature of the civil and military infrastructure existing in the theater before hostilities begin. In well-developed regions, military forces can begin operations quickly without having to construct the needed sustainment base. In less-developed regions of the world, the sustainment base may have to be constructed at the same time as combat and sustainment forces are deploying. In forward-presence theaters (such as the Republic of Korea), HNS agreements assist in operating and maintaining the sustainment base. Reception facilities are most critical during the initial stages of any potential conflict.

MISSION

The USACE provides support to the CINC, the AS CC, and engineer units having facilities management and construction missions. The theater USACE element commander may support multiple commanders within the ASCC and other service components. His mission includes—

- Planning and designing theater facilities for contract construction.
- Providing quality assurance for contract construction and troop construction, if requested.
- Managing the contract construction program.
- Planning for and acquiring real estate.
- Managing the LOGCAP contract, including acting as administrative contracting officer (ACO) for LOGCAP construction and providing technical support for logistics services provided by LOGCAP and, if required, a separate ACO for logistics services.
- Providing technical support to Theater Construction Management System (TCMS) and Theater Army Construction Automated Planning System (TACAPS) users.
- Managing finance and accounting for all appropriated military construction funds provided for in-theater construction.
- Providing USACE liaison to the CINC and ASCC staff engineers.

RESPONSIBILITIES

The ASCC tailors the engineer structure to theater requirements. All engineer units—combat, construction, or topographic—are focused on operations in the CZ. They also provide general engineering support to the theater. Engineers must be closely tied into current and future operational planning and have their own C^2 structure to assure the timely and proper execution of the intent and scheme of maneuver.

Engineer forces at the operational level are responsible for constructing, maintaining, and

rehabilitating the theater support base. Their responsibilities include support to other services, agencies, and allied military forces in joint and multinational theaters of operations. The ability of CSS units to perform sustainment operations as well as movement and sheltering of combat/combat support forces depends on adequate, responsive engineer support. The number and type of operational-level engineer support units depend on the size of the support base required, HN infrastructure, the mission, the availability of existing engineer support in the theater of operation, and perceived threat in the rear area.

SUPPORT FUNCTIONS

Engineer support in a mature theater is provided on a mission or area basis according to the theater commander's priorities and construction policy. Engineer units at the operational level provide topographic support to the theater, general engineer support to all US bases or base clusters in the COMMZ, and contract construction support. Additionally, operational-level engineers may be tasked to provide support to the combat area, a host nation, or another allied military force. Based on the policies and priorities established by the theater commander, the senior engineer commander in the theater organizes his forces to best support the Army and other services. The prioritized mission-type engineer support concept favors less restrictive command relationships; therefore, operational-level engineer units are normally employed in GS or DS of customer units. Operational control or attached relationships may prevent the senior engineer command from effectively managing the theater engineer resources.

TOPOGRAPHIC SUPPORT

Tailored to meet the requirements of the particular operational area, a topographic battalion is assigned to the senior engineer commander. Topographic missions include analyzing terrain for IPB and to aid tactical decisions, updating existing maps and charts, and establishing geodetic survey controls in the operational area. The theater CINC establishes topographic priorities. The HNS, through international agreements, or DMA provides all standard topographic products used in support of combat operations. The topographic battalion supplements and enhances DMA's efforts by compiling data from various sources into special-purpose topographic products such as:

- Maps.
- Map overprints.
- Overlays: line-of-sight, cross-country movement, cover and concealment, route analysis, and obstacles.
- Terrain studies.
- Satellite-image-based map substitutes.
- Digital data for C^2, mission planning, and rehearsal systems.
- Geodetic survey support for precise positioning of weapons.

The theater topographic battalion provides the ASCC staff with a team for planning requirements. Included are the assistant theater topographic engineer, who helps the theater engineer arrange topographic support between the ASCC and DMA, other services, and allied organizations. FM 5-105 provides a detailed explanation of topographic support.

CONSTRUCTION SUPPORT

In consonance with JCS guidance, the combatant CINC establishes broad standards and policies for theater construction that guide engineer operations, whether they are performed by Air Force, Army, ***or*** Navy units. They are based on coordinated planning by construction representatives from all service components. Theater construction policies establish standards, priorities, and the theater construction management structure.

Organization

The combatant CINC may retain control at his level or delegate construction management to a regional contingency engineering manager (RCEM). When the Army is the RCEM, the senior engineer commander performs this function. The RCEM manages all construction, repair, and facility modification in the COMMZ. This structure provides centralized control with decentralized execution. The RCEM also manages all troop, contract, and

HN construction repair operations in the COMMZ. Such a structure ensures that theater construction assets are employed according to theater priorities. The RCEM's responsibilities are to-

- •Manage troop construction.
- •Manage contract construction.
- •Integrate prioritized construction projects from all component commanders into a regional program.
- • Prioritize US requests for HN construction support in the region.
- • Manage and monitor procurement of Class IV construction materials.

Positioned within the established theater support structure, the senior engineer command, with its subordinate engineer units, provides the framework for this structure. Defining parts of the theater as a region, a district, and an area, the following organization is formed:

- •The senior Army engineer commander is the RCEM.
- •The first subordinate engineer commander is the district contingency engineering manager (DCEM).
- •The second subordinate engineer commander is the area contingency engineering manager (ACEM).

These designations result in engineer commanders becoming wartime construction managers in their operational areas. Figure 11-1 shows this organization.

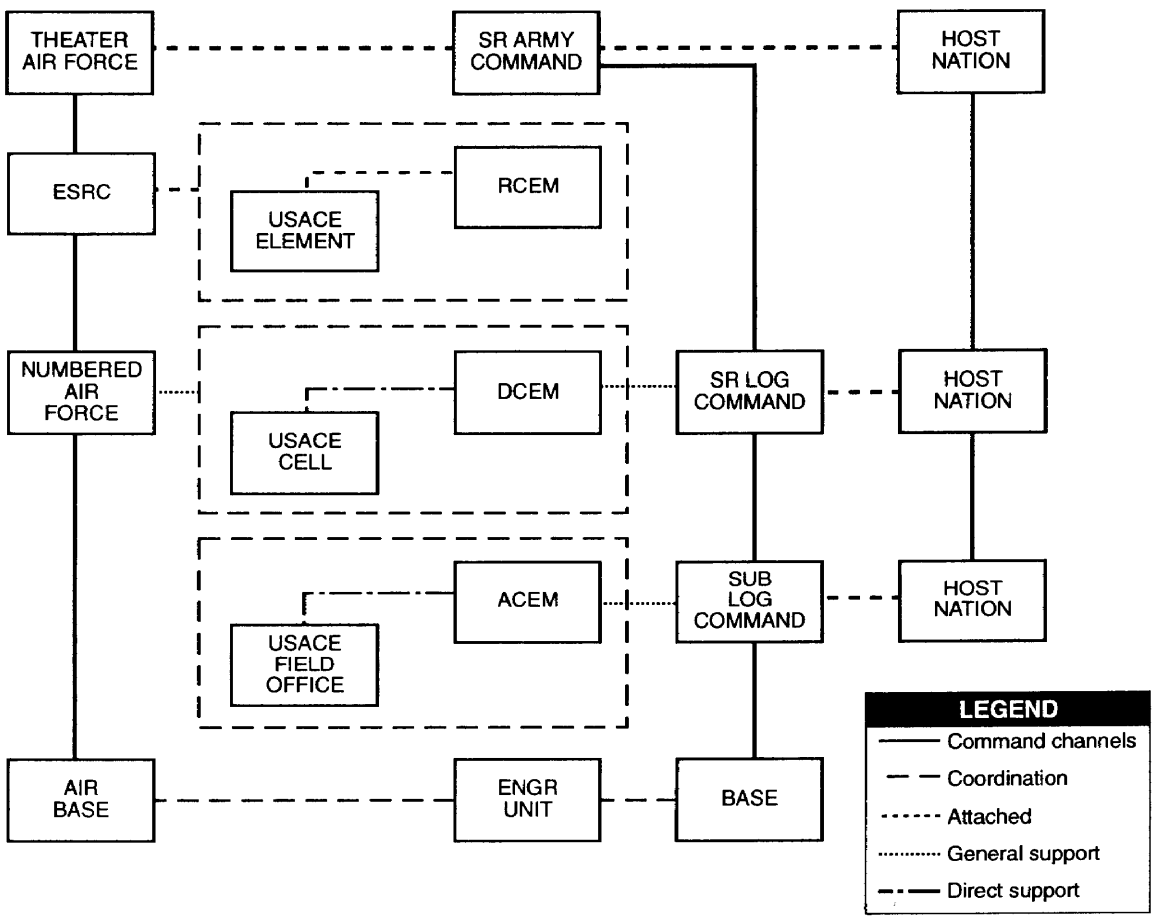


Figure 11-1. Wartime Construction Management Organization

Procedures

Construction directives may be issued at the senior engineer command; however, this is normally only for large installation requirements such as a base camp or logistical facility. The ACEM issues construction directives to subordinate units that contain the specifications and drawings needed to construct a new facility. These directives are generally for construction only. Occasionally, the ACEM issues directives for design and construction. These are normally limited to the upgrade or repair of existing facilities or site adaptation of standard designs. The ACEM's staff inspects unit projects for compliance with plans, specifications, and sound construction practices. If support from a construction support company, a dump truck company, a pipeline construction company, or a port construction company is required, the ACEM issues a separate directive to that unit specifying the particular support it is to provide.

Decentralized execution of the wartime construction program necessitates that work requests enter the system at the lowest possible level. Alignment along area support boundaries provides established conduits through the senior logistics organization. If the senior logistics organization cannot accomplish the work with its organic assets, it prioritizes the requests and provides them to the supporting ACEM.

CA teams receive HN requests for US engineer support and pass them to the ACEM for execution. The ACEM adds these requests to the existing work load according to established theater priorities and accomplishes them by troop, contract, or HN effort, as applicable. When they cannot accomplish work, the ACEM enters it into a construction/repair backlog and passes it to the engineer brigade/ DCEM for resolution.

Other US services submit work requests directly to the DCEM in charge of the operational area. The DCEM prioritizes requests according to theater priorities and provides them to the ACEM supporting the area that requires the work. When work cannot be foreseeably accomplished, the RCEM resolves the problem.

The RCEM may receive work from the theater base development plan (BDP). He prioritizes it and passes it to the appropriate DCEM for accomplishment. He may also redistribute backlog work to other DCEMs that are not fully committed.

This two-way flow of backlog and tasking identifies the required workload to each level of the wartime construction management organization. The ACEM can do objective scheduling according to theater priorities. Only an exceptional case needs to be referred to higher headquarters to settle a question of priority. FM 5-116 contains a detailed flow chart that summarizes these procedures.

Priorities

The combatant CINC or JFC establishes mission priorities. Each engineer headquarters must prioritize its requirements according to operational-area priorities and resolve conflicts through the chain of command. Engineer work requirements throughout the operational area normally exceed capabilities. The establishment of a broad priority system by the theater commander assists in applying resources against only those tasks that are most critical to success. The following implications of *non* support provide the framework for assessing the priority of required engineer support:

- Priority 1- High loss of life or defeat in combat.
- Priority 2- Degraded combat effectiveness or increased vulnerability on the battlefield.
- Priority 3- Degraded noncritical CSS.

Planning

Successful theater construction depends on an adequate supply of materials as well as construction capability. Typically, during the early stages. of a contingency operation, war-damage repair and construction of mission-essential facilities dominate engineer construction activities. As the operational area matures, it requires more substantial facilities and more construction forces. One of the primary responsibilities of the senior engineer command staff is to forecast the types and quantities of engineer materials required for

the theater. The Civil Engineer Support Plan (CESP) usually establishes initial requirements during predeployment planning. Planning during the operation requires reliable intelligence concerning damaged roads, airfields, or infrastructure facilities, facilities requiring upgrade, and facilities that are needed. TACAPS—an Army Facilities Components System (AFCS) software package—was designed to assist engineer planners in assessing theater facility requirements for deploying forces. The AFCS is a guide to determining material requirements for needed facilities.

The senior engineer command staff must also determine what materials are available from local manufacturers, local commercial stockpiles, and/or HN government assets. Materials not locally available must either be procured out of theater or produced in theater by engineer units. Materials in the latter category include aggregate, concrete, construction water, asphalt, and lumber. A local procurement system must be established to expedite the procurement of local materials. Local procurement may be restricted in some theaters or the contracting officer representatives (COR) may set prices to avoid inflating the cost of construction materials in the HN. When planning construction projects in a theater of operations, the following principles apply:

- Accomplish construction within the allotted time, using a minimum of materials, equipment, and manpower.
- Make maximum use of the installations and facilities described in the AFCS and other applicable standard drawings.
- Use simple, flexible designs.
- Incorporate available materials—either locally procured or normal supply items— in designs.
- Follow the theater commander's established construction standards.
- Repair or modify existing facilities before constructing new ones.
- Provide only the minimum facilities consistent with military necessity.
- Avoid creating lucrative targets; disperse the facilities.
- Plan camouflage and deception during site selection and construction.

Design

Theater-specific standard designs are usually developed at the senior engineer command for use throughout the theater. Designers must consider the availability of construction materials when designing projects for the operational area. Many designs may not be practical because of logistics. For example, although AFCS and TCMS designs are adjusted for various climates—such as temperate, desert, tropic, and arctic—they may have to be modified to use unique local building materials and practices. Military designers must know construction standards and materials commonly used in the region. Designs must include the use of local materials or provide flexible use of substitute materials. This is particularly important when designing structures in contingency theaters. Many facilities are turned over to local authorities whose operating and maintenance capabilities during long-term use must be considered.

Standards

The construction standards for an operational area are initial standard: up to 6 months expected use, or temporary standard: up to 24 months expected use. Since the design life is short, only essential utilities are provided, also reducing engineer material requirements. Generally, wartime requirements for facilities are satisfied, in order of priority, by—

- Using existing US- or HN-controlled facilities.
- Modifying existing facilities rather than new construction.
- Constructing new facilities, using austere design and construction techniques.
- Appropriately balancing use of US engineer troop units and contractors.

Army forces deployed to developed areas capitalize on an established infrastructure by maximizing the use of existing facilities. Construction management focuses on facility

modification and battle damage repair, making maximum use of HNS manpower, equipment, and materials. Army forces deployed to lesser developed operational areas rely more on construction of new, austere facilities. HNS may be less available than in developed areas; however, a LOGCAP contractor may be available to assist in theater construction and/or repair requirements.

Materials

Adequate Class IV supplies and timely delivery of the materials to the work site are essential to mission accomplishment. If they are to be successful in the theater of operations, engineer commanders must understand the logistics system and know where to go for required logistical support. Massive requirements for Class IV construction materials distinguish engineer requirements from those of other units in the theater. They are central to the ability of operational engineer units to construct and maintain facilities to support the sustainment base. For this reason, the senior engineer command usually plays a key role in managing the allocation of theater construction materials.

Engineers look to their supporting MMC for most of their Class IV construction items. They must identify requirements with considerable specificity and work with their supply support activity to develop a delivery plan that gets the required materials to the right place and at the right time to keep engineers working. Engineer participation in local purchasing and cooperation with the supporting MMC are key to adapting and substituting locally available materials.

Unlike other classes of supply, Class IV construction materials are not provided based on documented consumption rates, and there are no anticipated surge rates. Several months may elapse between the initiation of a requisition and the arrival of the material in the theater. Therefore, it is crucial that operational-level engineers estimate their requirements as soon as possible and initiate requisitions in advance of deployment or operations. Class IV procurement will often require extraordinary procedures such as local purchase, LOGCAP, or contracting at locations in the proximity of the theater. The senior engineer command submits initial material forecasts using AFCS and/for CESP data and BDPs.

CONTRACTOR SUPPORT

The USACE or Naval Facilities Engineering Command (NAVFACENGCOM) construction contract management organization controls contract work. In a forward-presence theater, personnel staffing an existing USACE organization in that theater—such as the US Army Engineer District-Europe in Central Europe or the US Army Engineer Far East District in Korea—provide USACE support. In a contingency theater in countries that do not have an assigned contract construction agent, the CINC, ASCC, and USAC will determine this support.

Contractor operations are under the control of contracting officers. Various service and construction agents throughout the world perform contract construction. Each service has its own geographic areas of operation, but only one design construction agent is in any one area. DOD assigns regional contract construction responsibilities as follows:

- USACE: Northeast and Central Asia, Central and Northern Europe, North and South America, the Middle East, and Northeast Africa.
- NAVFACENGCOM: the Iberian Peninsula, the South Pacific, the Caribbean Sea, Antarctica, Southeast Asia, and the Mediterranean Basin.
- Air Force Regional Civil Engineer: the United Kingdom.

Contract management offices may operate in support of engineer brigades and groups or they may operate independently, depending on the nature of the contingency and the theater location.

BASE DEVELOPMENT

The theater BDP results from concurrent planning by the CINC's staff and the service component staff considering strategic plans and resources. The senior engineer commander has overall responsibility for base development and is responsible for the more detailed planning for each base. His staff, in

coordination with the senior Army staff, identifies general locations for major facilities and tasks the DCEM or the ACEM to do the detailed planning and the facility siting. Base development planning is normally not performed below the ACEM level. The senior engineer command develops a time-phased BDP, considering the facilities needed and the construction assets and construction materials available. The senior engineer command passes this plan to the RCEM for execution.

The ACEM or DCEM staff reconnoiters the proposed sites and develops plans and specifications in close coordination with the major logistical commands that use the facilities. The staff forwards these designs through the DCEM to the senior engineer command for approval and incorporation into the overall theater BDP.

Planning is an ongoing process. In peacetime, the CINC develops contingency plans for various scenarios. CSS planning is general in nature and is only done to the extent necessary to identify resource requirements and assess OPLAN supportability. In a wartime environment, strategic changes may cause a shift in theater objectives to a new operational area. This, in turn, generates a requirement for new bases and/or major construction projects at existing bases in the new operational area. Under these circumstances, base development planning is more general in support of the development of COAs and then detailed by the senior engineer command to support the selected COA.

The senior engineer command can use the AFCS or the TCMS to help determine the engineer force structure required to execute the BDP. It also considers HN construction capabilities and contractor availability along with the availability of construction materials from HN sources in developing a time-phased plan for constructing the needed facilities. An additional consideration is ensuring that adequate port facilities are available early in base development to provide reception facilities for equipment and materials required to execute the plan. This may require early development of LOTS operation sites and may involve dredging of ship channels to provide access to oceangoing vessels. Other specialized engineer capabilities like well-drilling or diving detachments may also be necessary early in the base development process. In any theater, base development is an important initial consideration. Force bed-down is a substantial sustainment function in all theaters. Whether using existing facilities or constructing temporary camps, developing the operating base from an austere to developed environment requires integrated planning.

REAL ESTATE PLANNING AND ACQUISITION

The USACE theater element provides technical real estate guidance and advice to the theater commander. In addition to recommending real estate policies and operational procedures, it acquires, manages, disposes of, administers payment for rent and damages, handles claims, and prepares records and reports for real estate used within the theater. The theater element also exercises staff supervision over real estate operations of subordinate Army commands and provides real estate support to other US services.

A planning group that includes the USACE theater element and representatives of all service commanders must initiate real estate planning in the preparatory phases of a campaign. The theater engineer participates in all planning activities. In addition to plans for real estate operations during hostilities, consideration should be given to real estate requirements for the occupation period after hostilities cease.

US forces acquire real estate in theater by seizing or requisitioning it without formal documentation. Seizure is resorted to only when an urgent military necessity exists and only with the approval of the commander who has area responsibility, HN property may be occupied without documentation to the extent that tactical operations dictate and according to US/HN agreements. Normally, property is obtained through requisition, which involves a demand on the owner of the property or the owner's representative. No rent or other compensation is paid for seized or requisitioned property in the CZ or for damage resulting from acts of war or from ordinary military wear and tear.

Outside the active CZ, property is normally acquired by lease or HN agreements, and all transactions are documented thoroughly under the applicable provisions of theater directives. Large tracts of real estate are required for ports, staging areas, training and maneuver areas, leave centers, supply depots, and headquarters installations. Some of this property may be highly developed and have considerable value to the civilian population. Procedures must be followed to acquire the required property while ensuring that the legal rights of owners are protected.

REAL PROPERTY MAINTENANCE

The combatant CINC has overall responsibility for real property maintenance activities (RPMA). He normally delegates authority to the ASCC or senior Army commander, who may further delegate to the senior logistics command. The senior logistics command, through its subordinate logistics commands and installation commanders, normally provides the needed RPMA support. Principal RPMA in a theater of operations include operation, repair, and maintenance of facilities and utilities, fire prevention and protection, and refuse collection and disposal. RPMA requirements that exceed the logistics organization's capabilities are forwarded to the supporting ACEM for execution according to theater priorities. The senior logistics command provides technical RPMA guidance to subordinate logistics organizations. The subordinate logistics organizations provide RPMA support to all Army facilities in its OA, including leased facilities unless HNS is available for leased facilities.

Configuring engineer units to support the logistics organization is based on the expected RPMA work load. The degree of nonstandardization among subordinate logistics organizations—such as the coverage area, the number and types of units supported, and the theater of operations—necessitates flexible engineer unit design. Engineer units are tailored to the specific logistics organization to accomplish RPMA missions, and they depend on the logistics organization for sustainment support. A possible engineer organization consists of a C^2 headquarters, fire-fighting teams, and utilities teams.

- An engineer administration and headquarters team provides C^2, command support, and minimal administrative and logistical support for two or more platoons.
- Fire-fighting teams are task-organized based on facility requirements. A fire-fighting headquarters normally controls from four to five fire-fighting teams consisting of a combination of the following trucks: water, fire, brush-fire, and crash rescue. The organization provides the capability to implement fire-prevention and fire-fighting programs.
- Utilities teams are assigned based on the population serviced by the logistics organization. Geographic considerations aside, planning factors provide one team for each installation with a population between 2,500 and 4,000. The utilities team is capable of providing facilities engineering support, limited carpentry, masonry, electrical, plumbing, and road maintenance and repair. It is also capable of performing limited unit maintenance.

Operation, Repair, and Maintenance of Facilities and Utilities

Electrical power may be available from commercial sources in a mature theater. Power generation capability, however, is required in most contingency theaters where commercial power is unreliable. Distribution systems are required and adequate engineer units must be provided to do the necessary work. Standby power is required for critical facilities served with commercial power. A potable water supply and waste-water collection systems require maintenance at most COMMZ installations and bases. The HN may provide the water and operate sewage treatment facilities, but RPMA assets are required to maintain the utilities systems on bases and installations in the COMMZ to repair limited war damage. Austere water and sanitary facilities are used for troop bases constructed in a contingency operation. The operation, maintenance, or repair of tactical generators is not an RPMA function. Normally, each logistics organization has an assigned unit that provides RPMA support to

facilities located within the logistics organization AOR.

Fire Prevention and Protection

Engineer fire-fighting units supporting the senior logistics command provide needed fire protection that is not available from the HN or the installation directorate of public works. Fire-fighting assets are allocated based on the troop population and the size of storage areas.

Refuse Collection and Disposal

The senior logistics commands are responsible for establishing sanitary landfills for their operational areas. An engineer utilities detachment supporting a subordinate logistics command normally establishes and operates the landfill. In many areas, they use existing HN landfills; in others, contract landfills are available. The subordinate logistics command may use local labor to operate landfills. Commanders must give special consideration to hazardous waste, particularly waste products generated by medical facilities and maintenance operations. Special considerations may apply to the disposal of hazardous waste. US federal or HN environmental laws may require packaging and or removal of these containers from theater.

SUPPORT TO DEVELOPING THEATERS

Support for force projection/contingency operations in undeveloped theaters mayor may not involve combined arms operations but does involve the creation of a sustainment base where none usually exists. HNS usually is not available and, if present, is normally limited. Additionally, the existing infrastructure may not support the needs of CS or CSS units.

When planning contingency operations, planners must identify general engineering support requirements and corresponding engineer forces early. While forces participating in the force projection/ contingency operations may be corps level and below, the majority of construction engineer units are located in operational-level engineer organizations. Tailoring an engineer force from a mixture of multiechelon units will probably be the norm for most contingency operations.

The contingency engineer force may be built around a brigade or group headquarters. Support such as construction contracting, construction Class IV supply, and real estate teams is provided from other TOE or TDA engineer organizations, such as the USACE, in order to meet theater sustainment needs. Because of its familiarity with operational-level engineer units, the senior engineer headquarters should be consulted during task organization planning.

Developing immature theaters presents much the same problem as contingency theaters. Operational-level engineer units perform general engineering tasks well before a COMMZ is established. The deployment plan contains an orderly progression of the JTF based on the arrival of operational-level engineer units. As in a contingency theater, certain elements will usually be required from the operational level in the early stages of an operation. Normally, these elements are assigned to the senior Army engineer command in theater. Since the mission, logistical support, and geographic orientation of operational-level engineers differ from corps and below engineers, separate command structures are necessary. Until the engineer force grows to sufficient numbers to require separate command structures, the senior engineer command in theater—often a maneuver engineer headquarters—may be augmented by staff with responsibilities to plan and coordinate general engineer support and to perform the functions of the RCEM, DCEM, and ACEM.

AREA DAMAGE CONTROL (ADC)

ADC is the measures taken before, during, and after hostile action to reduce the probability of damage and to minimize its effects. The rear operations center (ROC) coordinates all engineer support of A-DC with the supporting ACEM, making maximum use of HN capabilities. It coordinates all HNS through the CA team. Base commanders and base cluster commanders develop ADC plans in coordination with the ROC. In most instances, bases and base clusters have to rely on their

own assets; however, engineer units may be used in critical situations, depending on the priority of their other work. Engineer units execute rear area restoration missions according to theater construction priorities. Typical missions include power restoration and production, rubble clearance, removal of downed trees, and repair of critical war-damaged facilities and installations.

Engineer units develop SOPS that integrate engineer support into the AD C team composition. The number and size of the teams depend on the ROC ADC plan. The basic unit is an engineer squad equipped with squad tools, air compressors, dozers, and a crane or wrecker. From the squad, the team can be increased to platoon, company, or battalion size, depending on the situation. Principal missions involve clearing the LOC of rubble and debris, fighting fires and floods, salvaging equipment, rescuing people, and preparing sites for deliberate decontamination operations.

The ROC directly tasks emergency ADC missions to the AC EM. The wartime construction manager prioritizes other ADC missions, including preattack measures and any damage repair missions. Engineers coordinate with the ROC for MP and explosive ordnance disposal (EOD) support.

Engineer units may also be tasked to perform ADC missions in support of the Air Force. The ACEM forwards emergency repair requests beyond its capability to the DCEM. When operating on the air base, the base civil engineer establishes mission priorities. FMs 5-104, 5-116, and 90-23 provide additional information regarding ADC.

PART FOUR

Security and Rear Operations

Conserving the fighting potential of his force is one of the ASCC's most important responsibilities. Security conserves the fighting potential of the force so that that potential can be applied at the decisive time and place. Operational security includes protecting the force from enemy air, ground, and sea attack and countering the enemy's use of firepower by making soldiers and operational formations and facilities difficult to locate, strike, and destroy. In safeguarding operational forces, the ASCC conducts ECCM, integrates air defense coverage, implements NBC defensive measures, and conducts rear operations.

Chapter 12

Military Police Support

This chapter discusses the role of military police at the operational level. It covers the MP mission and functions and support to contingency operations. Military police at the operational level provide the senior Army commander with a flexible force to execute combat, combat support, and combat service support missions throughout the COMMZ.

MISSION

MP provide combat power for rear operations. MP conducting combat battlefield circulation control (BCC) operations expedite the forward movement of combat resources. They provide area security for units and activities located in the COMMZ, and they take charge of EPW. MP conducting law and order operations in support of the senior logistics headquarters provide commanders and soldiers with a more secure environment in which to conduct military operations.

In the COMMZ, a provost marshal (PM) and Army MP units assigned to the theater provide support to the ASCC. Most MP units are assigned to the senior CSS organization. If that organization is a TAACOM, an MP brigade is assigned to support forces operating within the TAACOM AOR. The MP unit commander is the PM for the senior CSS organization.

Most special-purpose MP companies operate only in a maturing theater, as they arrive with the advent of their supported operational-level unit. Those assigned to the operational-level transportation headquarters provide security for port, waterway, and railway facilities in areas under US control. Those assigned to transportation terminal battalions prevent pilferage and intentional mishandling of cargo. MP companies assigned to the theater petroleum group deny sabotage and pilferage attempts. They also help provide security for critical pumping stations and transfer points. MP companies are also assigned, when needed, to ordnance battalions to provide security of conventional ammunition at ASPs.

In a developing theater, senior CSS headquarters MP can carry out some of the security responsibilities until the operational-level functional MP units arrive. But, in this instance, they concentrate on providing increased security on an area basis as part of the senior CSS headquarters' integrated security plan in accord with the senior CSS headquarters commander's priorities for MP employment. See FMs 19-1 and 19-4 for a full discussion of MP support in the COMMZ.

The size and composition of a theater's MP force is tailored to meet the operational environment and is determined by the--

- Nature of the operation, whether unilateral, joint, or multinational.
- Size of the COMMZ.
- Maturity of the theater.
- Nature of the rear area, whether friendly or hostile.
- Capability of the HN to provide MP-related support.
- EPW evacuation and internment policy: to retain in US custody, transfer to HN, or evacuate to CONUS or some other out-of-theater location.
- Size of the MSR network and MC required behind the corps rear boundaries.
- Number of designated critical facilities.
- Resources or key personnel requiring dedicated MP security.
- Ability of HN forces to control the civilian population to preclude interference with military operations.
- Resupply strategy: air, ground, or sea.

Throughout the theater of operations, the senior MP officer at each echelon is the commander's advisor and planner for MP operations. The PM—

- Advises the commander and staff of MP capabilities.
- Prepares plans and policies.
- Coordinates MP operations.
- Assists and supervises interaction of supporting and supported units.
- Reviews current MP operations.
- Coordinates with allied forces and HN military and civilian police.

In the absence of specific directions or orders, the PM plans the use of MP assets based on assumptions consistent with a thorough knowledge of the situation and mission. The PM considers—

- The strategic and military end state.
- METT-T.
- IPB.
- Environment within the operational area, both physical and cultural.
- Specific missions of MP units in the area.
- MP unit equipment and personnel.

SUPPORT FUNCTIONS

MP units provide combat, CS, and CSS within the senior CSS organization operational area. Special-purpose MP units assigned to functional elements and organizations located in the operational area provide functional support. Individual special-purpose MP companies provide dedicated security for critical facilities and supplies operated or controlled by their parent unit. MP units perform all four MP battlefield missions: area security, BCC, law and order operations, and EPW operations.

AREA SECURITY

Senior CSS element MP units help provide security and protection in the rear areas. MP operations are an integral part of the senior CSS element and subordinate units' coordinated rear security operations and plans. MP area security operations include area reconnaissance and surveillance; protection of designated critical facilities, resources, MSR critical points, and key personnel; counterincursion and response force operations; and combatting terrorism.

When the territory of a theater coincides with that of an HN, the HN provides security of most LOC critical facilities. However, the HN may request US assistance. As the theater matures, the MP companies arriving with operational-level units provide that assistance. The JPO coordinates security of pipeline systems, and the MP companies subordinate to the petroleum group carry it out. The HN or Army port operator identifies port security requirements for US forces. The MTMC coordinates US port requirements, and MP companies assigned to transportation terminal battalions carry them out. However, harbor defense is a Navy and the Marine Corps

responsibility, which extends to the shoreline. If Army support is provided for harbor defense operations, it is subject to the provisions of specific agreements between the Army and the Navy.

The HN manager for the respective system identifies railway security needs for US forces. The senior MMC coordinates US requirements for these LOC. When the user cannot provide security, MP companies assigned to appropriate transportation units provide security of in-transit personnel and critical commodities along with the railway facilities located within areas under US control. Senior CSS headquarters MP also support the users of COMMZ LOC by aggressively patrolling the area through which the LOC pass. These supply corridors include ports, inland waterways, railways, pipelines, and airfields. US forces seldom have exclusive use of LOC facilities within a COMMZ; they are shared with allied forces and, therefore, all users provide their security. But when other forces do not use LOC facilities, security becomes a US responsibility.

MP play an important role in rear operations by conducting combat operations against the threat in the rear area. To counteract enemy incursions, MP aggressively patrol and reconnoiter likely avenues of approach and landing and drop zones. MP responding to the presence of the enemy identify, close with, and destroy small threat forces before they reach their objectives. Should the response force encounter or engage threat forces beyond its ability to defeat, it will immediately notify the ROC and maintain contact with the threat force to develop the situation. The response force will attempt to delay and disrupt the threat until a tactical combat force is committed to defeat the threat.

MP conduct counterterrorism operations to maintain control in areas vulnerable to terrorist actions. Normally, US forces unilaterally perform critical security requirements for the protection of senior headquarters. Although the US Army is the proponent for security, the component services that staff the headquarters share the protection of the unified theater headquarters. The senior logistic element MP unit in whose area of operations the unified command headquarters and the ASCC are located normally provides security to those headquarters.

BATTLEFIELD CIRCULATION CONTROL

BCC is an MP mission involving route reconnaissance and surveillance, MSR regulation and enforcement, straggler and refugee control, intelligence collecting and reporting, and dissemination of information.

MP implement HN and US staff element plans to control the forward movement of combat resources along LOC, working closely with the senior MCA's highway traffic division and the local MCT. In multinational operations, this support integrates the capabilities of available HN and allied forces and various US staff elements, including transportation, personnel, engineer, and CA. Army aviation is used to support circulation control where available.

MP operating traffic control posts and mobile patrols help stragglers return to their respective units through the personnel system. Refugee movement, which is restricted to routes other than MSRs, is primarily the responsibility of the G5/S5 and HN authority. MP assist, direct, or deny the movement of civilians whose location or direction of movement may hinder military operations. They also provide escorts to move US noncombatants from assembly points to theater embarkation terminals.

LAW AND ORDER OPERATIONS

The MP perform law and order operations to suppress the chance for criminal behavior and to confine US prisoners. They conduct these operations only when the combat commander requires and battle intensity permits. The commander’s need for these operations depends on METT-T.

Law enforcement operations on the battlefield are most often done as part of other MP operations. For example, MP perform physical security measures as part of their area security of critical assets. During intense combat operations, MP are needed to expedite

and conserve vital resources for combat forces. The need for MP to perform law and order operations increases during lulls in the battle or in areas not actively involved in combat operations. MP maintain liaison with other DOD police organizations and with HN authorities and allied police agencies.

As part of their law and order mission, MP counter terrorism to prevent or defeat terrorists operating within MP jurisdiction. MP antiterrorist and counterterrorist measures include assessing installation vulnerabilities, developing procedures to detect terrorist actions before they occur, hardening likely targets, and taking offensive action to destroy terrorist elements when necessary. Specially trained MP provide services to protect key personnel against terrorist actions and conduct hostage negotiations to obtain the safe release of captives. For a detailed discussion, see FM 100-37.

MP investigate offenses against US forces or property committed by persons subject to military law. Major incidents involving death, serious bodily injury, and war crimes are referred to investigators of the US Army Criminal Investigation Command (USACIC). USACIC also conducts sensitive investigations, supports CSS security operations, and manages criminal- and terrorist-related intelligence.

USACIC elements in the senior CSS organization are assigned to the CIC theater support element (TSE). They are placed in general support of the theater, but remain under the control of the USACIC region. TSEs, their subordinate theater area support elements (TASEs), and port area support elements (PASEs) provide USACIC support in the COMMZ. One TSE supports each senior logistics headquarters, one TASE supports each subordinate CSS headquarters, and one PASE supports each seaport.

ENEMY PRISONER OF WAR OPERATIONS

US policy demands that all persons who are captured, interned, or held by US forces during a conflict be treated humanely. Tactical commanders must resolve the problem of removing captives from the battle area. Maneuvering units must not be hindered by dealing with large numbers of prisoners. Sick or wounded captives must be taken to the nearest medical facility. Other captives are turned over to MP at the nearest EPW collecting point or holding area.

MP units assigned at division, corps, and senior CSS headquarters operate EPW collecting points and holding areas to temporarily hold captives until they can be removed from the battle area. Traditionally, they operate collecting points in a division operational area and holding areas in the corps or senior CSS headquarters operational area. However, collecting points may be operated wherever they are needed. At collecting points and holding areas, EPW are sustained and field processed.

EPW Confinement

MP assigned to the ASCC provide EPW internment and civilian internee confinement support missions. An MP prisoner of war unit and a separate MP confinement element provide MP support. EPW may be interned in theater under US control, transferred to HN custody under the provisions of Article 12 of the 1949 *Geneva PW Convention,* or evacuated out of theater for extended internment. Transfer to the HN or evacuation to CONUS are preferred internment arrangements due to the heavy drain on medical, engineering, and supply resources required to support EPW internment facilities. The branch center of the US Prisoner of War/Civilian Internee Information Center in CONUS attached from senior headquarters in theater provides the information, data, and statistics required of all nations under the Geneva conventions.

MP escort guard companies evacuate EPW from collecting points and holding areas in the CZ and the COMMZ. Evacuation is effected as expeditiously as possible, using transportation provided by the corps support group in the corps forward areas or the senior transportation organization in the COMMZ. Division and corps MP coordinate with the EPW brigade for the evacuation of EPW from the CZ to COMMZ EPW facilities. COMMZ

escort guards go into the CZ to assume custody of EPW as far forward as possible.

EPW Reception and Processing

EPW reception and processing facilities are established near designated transportation terminals in the COMMZ. MP at these facilities provide for the reception, administration, and physical processing of all US-captured EPW prior to their transfer or internment. MP teams sent from processing centers process EPW/civilian internees in medical channels. If the stay in medical channels is to be very temporary, processing can be carried out after the EPW are returned to MP control. While in medical channels, EPW/civilian internees are the administrative responsibility of the hospital commander. The echelon commander is responsible for designating security elements for EPW in medical channels.

EPW Evacuation and Internment

If EPW are to be evacuated and interned in CONUS, they must first be received at COMMZ EPW reception and processing facilities located at designated transportation terminals where they will be processed in accordance with DA directives. CONUS-based MP provide guards and guard escorts to evacuate EPW from the COMMZ to CONUS EPW reception and internment facilities.

CONFINEMENT OF US MILITARY PRISONERS

To support the post-trial confinement of US military prisoners, the MP confinement battalion is assigned to the senior Army command or the senior CSS organization. Persons in pretrial confinement are detained, when possible, in their units. Only when they present a hazard to the mission, themselves, or others are they placed in pretrial confinement at a detention or confinement facility under MP control. Other pretrial confinement, when required, is performed by unit personnel.

Military police operate an Army confinement facility, maintaining custody of US military prisoners and supporting them. Like the EPW battalion, this facility is located in the rear of the COMMZ, accessible to logistics and transportation support. Convicted prisoners are evacuated as rapidly as possible from the CZ to the COMMZ confinement facility by tactical level MP. Confinement teams are placed in direct support of CSS activity headquarters for pretrial detention purposes. Further evacuation of US prisoners from the COMMZ to CONUS is done in accordance with DA policy.

CONTINGENCY/FORCE PROJECTION OPERATIONS

MP support to contingency/force projection operations is characterized by austere force levels. This concept of contingency operations dictates a limited MP force able to operate effectively in a unique, highly vulnerable environment. Because of the expected limited duration of such operations and the scarcity of strategic lift assets, fewer MP are located at the operational level in a contingency theater. Those MP that are provided will concentrate their resources on area security and EPW operations.

BCC may assume added importance if the operational-level operational area is immediately adjacent to, or separated from, the tactical rear boundary. The MP force is able to support a contingency force within the personnel constraints set by the type of operation. The size of an MP force is influenced by—

- The number and distribution of LOC.
- The availability of adequate MSRs.
- The number of critical facilities and resources requiring security.
- The mission of the force.
- The type of terrain.
- The attitude of the indigenous population.

The composition of the MP force providing support to contingency operations is based on METT-T. Contingency operations generally introduce combat and support elements into the objective area, ensuring maximum combat power while keeping the logistical LOC to a minimum.

Chapter 13

Air and Missile Defense

This chapter addresses air and missile defense support at the operational level of war. It includes a brief look at the air threat to CSS complexes and addresses CSS force protection from an AD perspective. During most contingency operations, the center of gravity during deployment and entry operations will be critical C^2 nodes, the APODs and SPODs, and the organizations that make up the theater base. The bulk of the forces located in the theater base are CSS organizations assigned to the ASCC.

THE AIR THREAT AND JOINT SYNERGY

The current approach to air and missile defense emphasizes leveraging the synergy of joint capabilities to the maximum extent possible to counter the threat. Each joint force component focuses on the type air threat it is best equipped to engage and destroy. The entire spectrum of threat air platforms can be flown against operational-level forces and assets. Enemy air operations may include the use of tactical ballistic missiles (TBM), rotary- and fixed-wing manned aircraft, air-to-surface missiles, cruise missiles, and UAVs.

TACTICAL BALLISTIC MISSILES

TBM can be used against strategic-, operational-, or tactical-level targets and may carry weapons of mass destruction and conventional and improved conventional munitions. The TBM target set is best engaged by Army high-to medium-altitude AD (HIMAD) systems with an anti-TBM (ATBM) capability.

MANNED AIRCRAFT

Manned aircraft are best suited for air-to-air engagement of other manned fixed-winged aircraft. While joint offensive counterair (OCA) and defensive counterair (DCA) are expected to establish air superiority or air supremacy over the theater, the potential exists for isolated fixed-winged aircraft that successfully evade the joint OCA and DCA forces to attack theater forces. The potential presence of precision guided munitions and weapons of mass destruction on fixed-wing aircraft makes them a significant threat to operational-level forces and assets. Army ADA must therefore be prepared to destroy any fixed-wing manned aircraft that penetrate the CZ or COMMZ.

OTHER

The other aerial targets, cruise missiles, UAV, and rotary-wing aircraft operate at altitudes and locations where fixed-winged air-to-air combat is normally avoided. Rotary-wing aircraft are primarily a threat to forces in the CZ; but they may be used for insertion of UW forces in the COMMZ. Lethal UAVs and cruise missiles, with conventional and improved conventional munitions and weapons of mass destruction, pose a significant threat to forces throughout the theater. UAVs can also be used to conduct RISTA operations. Of major concern to AD commanders is the use of RISTA UAVs, which can provide an enemy with real-time targeting intelligence of friendly forces throughout the theater. Such a capability, when combined with long-range aerial and artillery weapons, provides a potential adversary the ability to conduct deep attacks.

ORGANIZATION

The CINC/JFC expects to establish air superiority or at least air parity as a result of joint OCA and DCA operations. The Army AD coordinator (AADCOORD) ensures that Army air and missile defense is integrated into joint and multinational counterair operations and planning. He deploys the operational-level AD brigades to provide protection for critical forces and geopolitical and military assets.

Army air and missile defense forces are deployed throughout the theater. Typical ADA forces assigned to each echelon of command are depicted in Figure 13-1. Each CSS command requests ADA protection from its corresponding level commander. The ASCC requires planning for integration of air and missile defense at the following echelons: numbered army, corps, and division.

NUMBERED ARMY

When a numbered army is introduced into a theater of operations, the AADCOORD coordinates ADA protection with an operational-level ADA brigade or an operational-level ADA battalion task force. The AADCOORD will employ these ADA resources to defend forces and assets within the supporting senior CSS headquarters in accordance with the CINC or JFC's air and missile defense priorities.

CORPS

Each corps has an assigned ADA brigade. The brigade's HIMAD and FAADS battalions provide air and missile defense for corps assets and forces. The brigade commander, who also serves as the corps AD officer, employs them in accordance with the corps commander's air and missile defense priorities. The corps commander exercises OPCON of all forces assigned or attached to the corps ADA brigade, although the AADCAD's rules of engagement (ROE) and weapons control procedures govern air and missile defense engagement operations.

DIVISION

Each division has an organic FAADS battalion. The battalion provides air and missile defense for division assets and forces in accordance with the division commander's AD priorities. The corps ADA brigade's HIMAD battalions can provide air and missile defense for some division assets; and corps air and missile defense assets may support the division depending on METT-T and the corps commander's priorities. The division commander exercises OPCON of the AD forces assigned or attached to the division, though air and missile defense engagements are subject to the AADC's ROE and weapons control procedures.

PRIORITIES

The CINC/JFC approves priorities for protection of forces and assets as well as critical geopolitical assets. The establishment of priorities must support the strategic, operational, and tactical objectives or MOOTW activities. The process used to determine priorities is based on military decision-making procedures, including the command estimate,

Command	Assigned ADA Forces
Theater	Operational-level ADA brigades
Numbered army	Operational-level ADA brigades
Corps	Corps ADA brigade
Division	Division ADA battalion
Separate regiment/brigade	ADA battery

Figure 13-1. ADA Forces by Echelon

METT-T, and assessment of the criticality, vulnerability, recuperability, and threat (CVRT).

Before any ADA is used on the battlefield, air and missile defense priorities must be established. To assist commanders in this task, a step-by-step decision-making process has been developed. When the supported commander follows this process, he can optimize the degree of support that ADA resources afford.

The product of this decision-making process is a prioritized list of selected forces and assets to be defended. Development of these priorities is the basis for planning effective air and missile defenses to meet the needs of the supported commander within the constraints presented by the limited number of available ADA resources. Since the CINC/JFC approves air and missile defense priorities, CSS commanders at all levels must communicate their priorities, through their higher headquarters, to the CINC/JFC. Since the CINC/JFC's priorities are designed to protect the entire force, all of the CSS commander's priorities for air and missile defense protection may not be supported. Considering the CVRT will provide the supported commander the basis to establish ADA priorities.

The supported commander conducts the first step of the decision-making process during his estimate of the situation. As he generates COAs and evaluates his assets, he determines which of these assets requires ADA protection. Determination is made by evaluating each asset for CVRT.

CRITICALITY

Criticality is the degree to which the asset is essential to mission accomplishment. Assets are categorized in priority as those which, if damaged—

- Prevent the execution of the plan of action.
- Cause immediate and serious interference with the execution of the plan of action.
- Ultimately cause serious interference with the execution of the plan of action.
- Might cause limited interference with the execution of the plan of action.

VULNERABILITY

Vulnerability is the degree to which the asset can survive an air or missile attack or is vulnerable to surveillance. Consideration should be given to the asset's hardness, its location, the degree to which it can disperse or displace to another position, the degree to which it can provide its own air and missile defense, and the amount of protection afforded by passive air and missile defense measures.

RECUPERABILITY

Recuperability is the degree to which the asset can recover from inflicted damage in terms of time, equipment, and available manpower to resume its mission.

THREAT

The probability of an asset being targeted for attack by enemy aircraft or missiles must be assessed if economical allocation of ADA resources is to be achieved. Targeting information provided by intelligence estimates, past enemy attack methods, and enemy doctrine are all useful in determining which assets require active air and missile defense protection.

AIR AND MISSLE DEFENSE DURING FORCE PROJECTION OPERATIONS

During the conduct of force projection operations, joint and multinational forces and facilities are vulnerable to both aircraft and tactical missile attack. The concentration of forces and CSS in the APODs and SPODs make them lucrative targets for attack with conventional, improved conventional, and mass destruction munitions. Joint active defense forces, including Army ADA, are normally among the first to deploy to the theater. US Air Force, US Navy, and allied or coalition air and naval forces provide defense against aircraft; and Army HIMAD and forward area air defense (FAAD) forces protect against all types of aircraft and missiles. As the lodgment is expanded, additional active

defense forces are deployed to the theater as part of the buildup in preparation for decisive operations.

Sufficient active defense forces must be deployed to the theater during early entry operations. HIMAD forces with ATBM capability and forward area AD systems (FAADS) forces provide the level of force protection needed to secure the lodgment from surveillance or attack by aircraft and missiles. ADA forces protect deploying tactical and CSS forces in the PODs and the theater base, as well as critical geopolitical assets listed in the CINC/JFC's air and missile defense priorities. The greatest threats to forces and assets in the lodgment are TBMs, cruise missiles, and RISTA UAVs. Forces are most vulnerable at locations where masses of soldiers and materiel are concentrated in constrained areas, such as beachheads, airfields, and dock facilities.

The commander of the highest echelon AD command in the theater or joint force normally participates as the CINC/JFC's AADCOORD. The AADCOORD integrates the Army air and missile defense activities throughout the theater of operations. Specifically, operational-level ADA brigades provide air and missile defense of critical assets in the theater base and throughout the COMMZ. The senior ADA headquarters commander employs his forces to provide the greatest possible protection to those assets and forces identified as the CINC/JFC's AD priorities.

Air and missile defense forces continue to arrive in the theater throughout the buildup leading to decisive operations. As the buildup progresses, the priorities for air and missile defense protection of selected critical assets can change. While critical assets may receive dedicated ADA protection, other friendly forces and assets within range of an ADA system will also receive a measure of protection.

Once sufficient combat power is deployed to begin expansion operations, the AADCOORD coordinates the air and missile defense design to conform to the CINC/JFC's changing priorities. During this phase, counter-RISTA becomes increasingly important as the CINC/JFC seeks to mask CSS bases and assembly areas positioned to support the decisive operations phase of the campaign plan. ADA provides leading edge capabilities in the reconnaissance/counterreconnaissance campaign. Air and missile defense elements engage and defeat threat aerial reconnaissance vehicles, including UAVs and helicopters.

Theater active defense forces adjust their coverage to protect as much of the deployed force as possible, while covering critical forces and assets according to the CINC/JFC's priorities. They consist of a complementary mix of systems—Theater High-altitude Area Defense System (THAAD) and Patriot—integrated in layers or tiers. Upper and lower tiers are fully integrated with space-based and other sensors to detect and destroy most types of ballistic missiles.

ADA forces support decisive operations by denying the use of threat aerial reconnaissance, defeating threat helicopter and fixed-wing aircraft, and preventing threat tactical ballistic and cruise missiles from disrupting combat operations. Corps and division ADA protect the maneuver forces while the operational-level ADA unit covers critical forward CSS bases and other assets and forces according to the CINC/JFC's priorities.

During the war termination and postconflict operations phase, the AD focus will be to continue defensive counterair and theater missile defense operations. The AADCOORD will coordinate the repositioning of forces to protect dispersed theater forces and assets. Though hostilities have ceased, air and missile defense forces must maintain full capability to destroy any threat aircraft or missiles targeted against theater forces or assets.

Air and missile defense will continue to protect the theater throughout redeployment and reconstitution. The ADA forces will complete reconstitution, redeploy selected forces, protect redeploying forces, and prepare to conduct follow-on operations.

INTEGRATED OPERATIONS

The theater CINC/JFC and the AADC coordinate and integrate the operations of operational-level air and missile defense forces with the operations of joint and multinational

air and missile defense forces. Normally, the AADCOORD performs Army air and missile defense integration functions for the CINC/JFC. The AADCOORD must ensure the projection of sufficient ADA forces to provide adequate protection for all forces and assets identified as CINC/JFC priorities. He recommends to the CINC/JFC the priorities for ADA protection within the theater. These recommendations are also provided to the AADC.

Figure 13-2 depicts the tiered characteristics of ADA protection over a theater of operations. This protection is provided for both tactical and CSS commands, organizations, and bases. It also provides ADA weapon system coverage for forces and assets not provided dedicated support.

- The THAAD will provide the upper tier of the defense. It provides for TBM defense of a large area and lowers the possibility of warhead leakage by providing for multiple shot opportunities at each incoming TBM.
- Patriot, which makes up the lower tier of the TBM defense, also provides defense against all the other types of aerial threats. It is positioned to provide point TBM defense of critical forces and assets while providing long-range coverage of likely air avenues of approach.
- Hawk complements Patriot by providing low to medium coverage of Patriot's flanks, as well as likely air avenues of approach. While Hawk has no ATBM capability, it does provide highly effective defense against fixed- and rotary-wing aircraft, as well as cruise missiles and UAVs.
- Avenger provides low-altitude point defense for critical assets and forces. It is highly mobile and lethal against all types of low-altitude fixed- and rotary-wing aircraft, along with cruise missiles and UAVs. Avenger battalions use the FAADS C^3I system to cue Avenger fire units using target data provided by the battalion's organic ground-based radars as well as data provided by the theater's HIMAD forces.

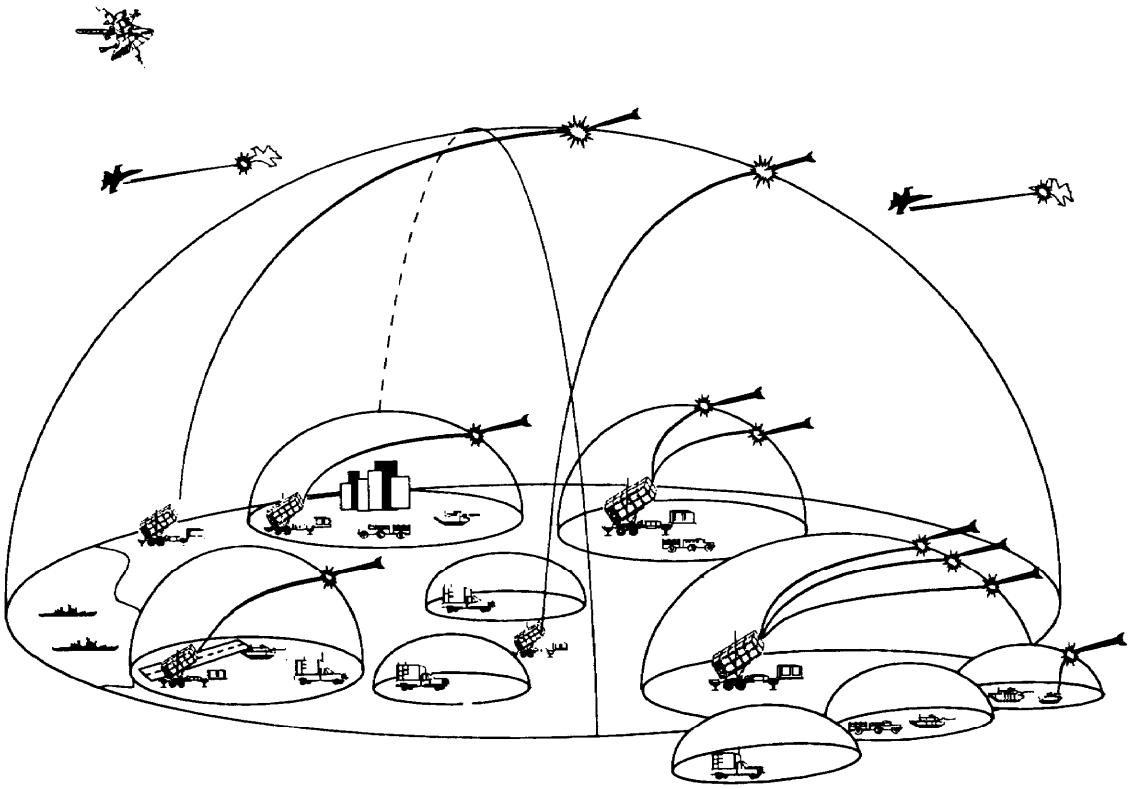


Figure 13-2. Integrated Theater Defense

SELF-DEFENSE MEASURES

In addition to the protection provided by Army ADA units throughout the AO, CSS units must act to enhance their own force protection against air and missile attack. While most self-defense measures are passive, all organizations must be prepared to use organic weapons for active defense.

Since ADA forces will not be able to provide dedicated air and missile defense for all CSS forces and assets in the AO, CSS organizations should be positioned to take advantage of the coverage that available air and missile defense forces provide. Using base clusters makes it possible for ADA units to cover more CSS assets than would be possible when units are dispersed throughout the AO. CSS assets identified as air and missile defense priorities that do not receive dedicated support should be positioned to take advantage of the coverage provided by ADA units protecting higher priority assets.

Passive air and missile defense operations include all the means a unit uses to avoid enemy detection, along with the measures taken to minimize damage when attacked. To avoid targeting, CSS units must use OPSEC to conceal their location from enemy visual and electronic surveillance. Within the base cluster, assets should be dispersed to the extent possible. Dispersal of assets in combination with the use of field fortifications and barriers can significantly reduce casualties and damage from air and missile attack.

CSS personnel and air defenders share responsibility for force protection of CSS complexes. The CSS commander develops air and missile priorities, which are integrated into the theater's priorities. The AADCOORD coordinates the employment of available air and missile defense assets to protect the maximum number of priority assets. Defensive fires provided by ADA and self-defense measures employed by CSS units combine to defeat enemy air and missile attacks against theater CSS.

Chapter 14

Weapons of Mass Destruction and Smoke Operations

Weapons of mass destruction (WMD) are among the most hazardous on the battlefield. US forces must survive, fight, and win if an enemy uses these weapons. Many nations have the capability to employ WMD. Threat forces may attack rear areas using WMD as well as conventional munitions in a coordinated effort to achieve specific objectives. Delivery systems include artillery, missiles, and manned and unmanned aircraft that use sophisticated target-acquisition and guidance systems. This chapter describes the effects of WMD destruction, the fundamentals of NBC defense, and the fundamentals of smoke operations.

WEAPONS OF MASS DESTRUCTION

The use of WMD can result in mass casualties, contamination of land, and extensive destruction. Force protection is an imperative in this environment. Commanders must never assume that they are immune to attack but consider ways of decreasing their risk. Units can survive the effects of WMD by anticipating their employment. Only cohesive, disciplined, physically fit, and well-trained units can function in this environment. Nevertheless, as a result of wearing protective equipment, long-term operations will degrade even the best individual and unit performance. Commanders can protect their forces in a variety of ways, including training, OPSEC, dispersion of forces, and proper use of terrain for shielding against effects. Being better prepared than the enemy for continuous operations under WMD-produced conditions will deter the enemy from using these weapons.

The employment of NBC weapons will greatly alter the tempo of combat. In an NBC environment, logistical battle command becomes more difficult and must concentrate on maintaining effective support. Employment of WMD can be especially effective in disrupting logistical support operations, and relatively few munitions are needed. SPODs, APODs, pre-positioned equipment storage sites, marshaling areas, and key logistical routes are likely targets. Logistical support facilities located in the COMMZ are prime targets. Control will be difficult even within the smallest unit. Personnel in protective clothing will be slow to respond to rapid changes in mission.

Decontamination of areas and equipment that have been contaminated is a major concern. Multinational operations become riskier with the threat of NBC use. Countries that cannot protect themselves against this threat may find themselves the primary targets of an enemy whose aim is to disintegrate the coalition. The likelihood that an enemy will use WMD against members of a coalition increases the need for US forces to demonstrate the ability to defend effectively against their effects. Commanders should consider that possibility in all strategic, operational, and tactical planning.

NUCLEAR WEAPONS

As a force that now has no organic nuclear capability, the Army must rely on Air Force and Navy nuclear capabilities to deter regional threats and, should it become necessary, to respond to regional use of these weapons. The integration of nuclear weapons and long-range ballistic missile systems expands the scope of regional conflict. Ballistic missiles significantly

reduce reaction times and create complex planning and decision criteria. The ability of some nations to employ nuclear weapons at extended ranges—using ballistic of cruise missiles and high-speed aircraft—will significantly enhance their effectiveness as instruments of terror. With this ability comes the possibility of escalating a conflict beyond regional boundaries.

Using intelligence systems, planners advise the commander of the enemy's capability to employ nuclear weapons and under what conditions he is most likely to do so. A significant intelligence task is locating these weapons and assessing the probability of their employment. Accordingly, the integration of national, joint, and multinational intelligence means is vital to this effort.

The immediate effects of a nuclear detonation are blast, thermal radiation, initial nuclear radiation, and electromagnetic pulse (EMP), which can cause significant personnel and materiel losses. Secondary effects include urban devastation, fires, and radiological contamination. The EMP from a nuclear detonation can affect unshielded electronic equipment and degrade C^3I systems. Residual radiation also can have long-term effects on personnel, equipment, facilities, terrain, and water sources. Therefore, ensuring that friendly force dispositions do not provide lucrative targets for nuclear weapons is important.

BIOLOGICAL WEAPONS

While the US has renounced the use of biological weapons, many other nations have not. The availability of biological weapons to possible enemies requires that commanders prepare for operations in a biologically contaminated environment. Defensive measures are necessary to mitigate the effects of a biological attack. Both military and civilian populations require information as well as psychological and medical preparation.

CHEMICAL WEAPONS

All current and future operations have the potential to occur in a chemically contaminated environment. Although US policy does not condone or authorize use of chemical weapons, US forces' preparedness to operate in this environment negates many possible advantages of employing them—itself a deterrent to their use.

Chemical weapons produce immediate and delayed effects that can hamper operations through the contamination of equipment, supplies, and critical terrain features. Commanders can reduce the effects of chemical employment by applying the fundamentals of contamination avoidance, protection, and decontamination. Chemical reconnaissance and decontamination are two planning imperatives for all future missions; training is the key. Detailed information on providing NBC protection to the force, as well as risk analysis and assessment, is in FM 3-4.

NBC OPERATIONS

NBC operations are essential to successfully executing the theater army mission. Support facilities, troop concentrations, and supplies in the COMMZ are extremely vulnerable to NBC attack. Threat forces may attack, using a combination of weapon systems. Aggressive precautions against the attack are necessary to increase survivability. An adequate defense is based on all units and personnel employing common defensive measures with support from specialized chemical units. Chemical units at all levels require extensive logistical support. Smoke and decontamination operations are resource-intensive; they require logistical planning and execution to ensure success. Detailed information on NBC defense is provided in related field manuals.

PLANNING

When planning the employment of chemical assets, the commander must balance the requirements against limited resources. The challenge is to accomplish the mission within resource constraints. Logistical considerations have as much impact on COAs as the enemy does.

Chemical operations must be anticipated as far in advance and as accurately as possible to accumulate assets needed to accommodate

any likely operation. These operations consume high rates of fuel, fog oil, econtaminants, and water and require a commitment of maintenance, transportation, food, and medical services.

NBC DEFENSE

Ports, airfields, supply depots, railheads, maintenance facilities, and major command headquarters are prime targets for NBC attacks. Forces operating in the rear area could contaminate critical command headquarters or supply facilities and significantly affect the responsiveness of support organizations.

Units in the COMMZ actively participate in the planning and execution of NBC defense operations. Only through a coordinated effort in which all units—not solely specialized chemical units—perform defensive measures can the ASCC's critical functions continue to be performed effectively. The performance of allocated defensive tasks counters the effects, including cumulative effects, of employing NBC weapons. However, they make normal operations more difficult and reduce overall efficiency; therefore the affected commander must consider mission degradation and hazards when employing defensive measures. Defensive tasks include contamination avoidance, protection, and decontamination.

Contamination Avoidance

The first NBC defensive fundamental is contamination avoidance, which is necessary to prevent degradation of the unit's performance. Avoiding contamination allows units to maintain tactical momentum and preserves combat power by keeping soldiers out of increased NBC protective postures. It also removes or lessens the need for decontamination. This task is accomplished through passive defensive measures: NBC reconnaissance, detection and identification, warning of NBC hazards, and limiting exposure to and the spread of contamination.

NBC Reconnaissance. The appropriate chemical headquarters, in coordination with the supported area headquarters, plans NBC reconnaissance activities. Dedicated NBC reconnaissance units conduct large-area reconnaissance throughout the COMMZ. The objective is to provide contamination information to commanders to assist in the development of their operations plans. NBC reconnaissance units report information to the NBC centers where it is analyzed and disseminated through periodic intelligence reports to US and allied forces.

Units perform NBC reconnaissance within their area. Specialized NBC reconnaissance units perform NBC reconnaissance outside unit areas. Additional NBC information comes from army units operating in the area and from other services and territorial forces. Their observations supplement other NBC reconnaissance efforts and provide the ASCC commander with a more complete picture of the rear area. All units have a responsibility to prevent the spread of contamination to uncontaminated personnel, equipment, supplies, and terrain. See FM 3-3 for additional information.

NBC reconnaissance units tend to operate at the squad level, requiring logistical support from the supported unit. They do not consume large amounts of supplies during their missions; however, because of the specialized nature of their equipment, particularly the M93 NBCRS (FOX), consideration must be given to the unit's maintenance needs.

Detection and Identification. US forces use organic detection and identification equipment to identify chemical agents. However, threat forces may employ chemical or biological agents that are unknown to US forces or are beyond the capability of our identification equipment. NBC reconnaissance units or trained medical and intelligence personnel sample suspected biological agents and forward them to supporting medical activities for identification. The fielding of BIDS provides commanders with an effective system to detect and identify biological agents.

NBC Warning and Reporting System. The ASCC operates a network of NBC warning and reporting centers that provides information about NBC hazards (see Figure 14-1). They direct the NBC warning and reporting collection effort and evaluate and disseminate NBC information. Commanders at all levels

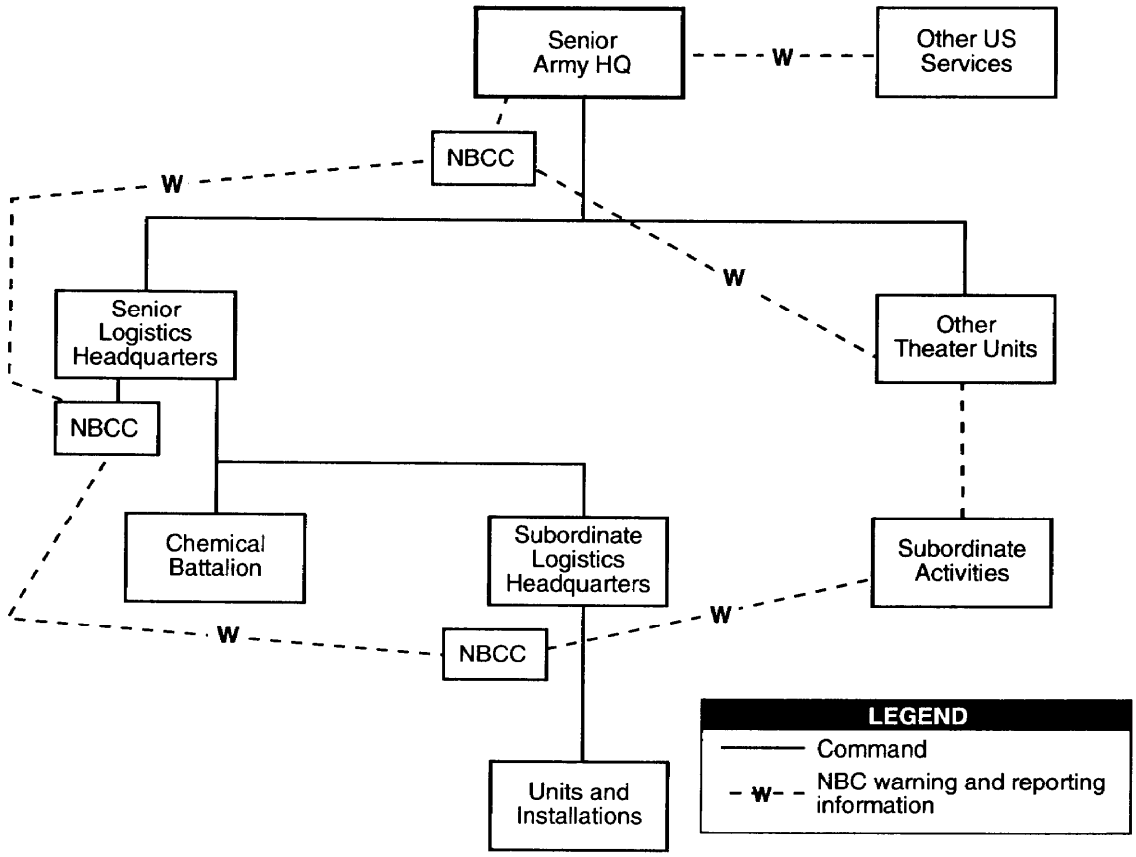


Figure 14-1. Chemical Command Relationships

then use NBC hazard information to execute their missions.

The NBC center at the ASCC headquarters coordinates activities throughout the theater. It acts as the focal point for all NBC battlefield contamination information. This centralized information point is particularly important because unit boundaries change often and known NBC contamination information is passed to the new units.

Chemical teams are assigned to senior logistics headquarters to provide NBC centers for their AORs. These subordinate centers function as the focal point for their area and provide the evaluated NBC information to the theater NBC center. They are under the command of the senior logistics headquarters to which they are assigned. The primary responsibility of the center is to collect, consolidate, evaluate, manage, and disseminate NBC data reported by all COMMZ agencies, to include interface with adjacent friendly forces and HN organizations. The NBC centers provide the evaluated NBC information to the units in their areas through operations channels. NBC centers coordinate with the appropriate allied nation NBC warning and reporting centers. Similar centers are found in the German territorial army as well as adjacent or collocated armed forces units of other allied nations.

Limiting Exposure. The primary purpose of BIDS is to limit the effects of large-area attacks with biological agents that have the potential for catastrophic effects to friendly forces. It will provide a basis for medical personnel to determine effective preventive measures and appropriate treatment if exposure occurs. Detection and identification of biological agents within the AO will limit adverse effects on operations and CSS systems.

Protection

Protection, the second NBC defensive fundamental, is initially an individual responsibility. Unit leaders must provide

proper instruction in protection skills. Prior to encountering a chemical hazard, units will use MOPP and other available protective means to balance unit effectiveness with personnel safety. After encountering a hazard, units will maintain or restore the level of individual protection through self-aid and exchange of protective clothing and equipment.

Collective protection systems provide NBC protection to groups of personnel and lessen the impact of individual protective measures. Such systems reduce the degradation caused by physical stress and loss of dexterity. Collective protection is applied to C^3 operations, medical operations, critical operational equipment, and rest-and-relief functions. See FM 3-4 for additional information.

Decontamination

The third NBC defensive fundamental is decontamination, which is performed to prevent casualties, to increase unit and individual effectiveness, and to limit the spread of contamination. Specialized decontamination elements provide operational-level units with decontamination support required beyond that of unit organic capabilities. Decontamination units use large-scale decontamination equipment and procedures to accomplish this support.

Units will perform personnel and operational equipment decontamination. All personnel will perform immediate personal decontamination to decontaminate their skin and equipment. Medical personnel will supervise nonmedical personnel performing patient decontamination in medical treatment facilities (see FM 8-100-4).

A decontamination specialist and decontamination devices assist in operational decontamination, which makes use of two decontamination techniques—MOPP gear exchange and vehicle wash-down. These techniques reduce the hazard to which personnel are exposed. As time and mission permit, specialized chemical elements perform thorough equipment decontamination to reduce the need for individual protection garments. Detailed decontamination operations are combined with other rear area and/or reconstitution operations.

Supported unit commanders establish priorities for decontaminating equipment, materiel stockpiles, facilities, terrain, and MSRs. Decontamination companies decontaminate higher priority materiel, facilities, and MSRs. The natural weathering process or the supported unit with organic resources decontaminates lower priority items. Unit plans for decontamination of large areas must include maximum use of HN equipment and materiel.

Decontamination operations require significant logistical support, such as medical, engineer, MP, maintenance, quartermaster, and transportation. The decontamination element requires engineer support to prepare thorough decontamination sites. MP are used for traffic control and, to a limited extent, security of the site. If a local water source is not available, supporting logistics activities—divisional or nondivisional—push water forward. Additional decontaminants may be required, depending on the type and amount of contamination.

Contaminated units also require extensive logical support. A medical treatment capability supports the decontamination site. Maintenance, quartermaster, and transportation elements are positioned to assist the contaminated units return to fully mission capable.

NBC SUPPORT STRUCTURE

Each service is staffed and organized to conduct NBC operations and operates independently except when greater economy is realized through cross-service operating agreements either at DOD or theater level. When cross-servicing applies, the Army is tasked to support the other services.

Army Service Component Commander

The ASCC, who is responsible for all US Army forces in the theater, provides general guidance for NBC readiness. Normally, the ASCC is responsible for NBC matters and handles them in accordance with the established doctrine. The ASCC headquarters has administrative and logistical responsibility for support of all US Army forces throughout the theater. Inherent in this relationship are

the corresponding responsibilities in the areas of NBC defense and smoke operations.

Senior Army NBC Staff

The senior army NBC staff elements coordinate matters in their AORs with corresponding staff elements in DA and other MACOMs. The staff is integrated into various staff elements of the senior army headquarters: intelligence, operations, and CSS sections. Key personnel, including the senior army chemical officer, recommend policies and priorities to their staffs and provide technical advice to other staff elements.

NBC staff personnel in the operations section monitor the overall situation and make recommendations on NBC matters to commanders and staffs. They recommend the allocation of chemical resources and supervise the senior army warning and reporting center.

Chemical Officer

The chemical officer oversees the management of chemical equipment, analyzes threat NBC capabilities, and disseminates NBC-related intelligence information.

Chemical Battle Staff

The chemical battle staff advises the commander and staff on all matters pertaining to NBC defense and the concept for chemical unit support of operations. In addition, they assist in the planning and coordination for logistical support requirements. Additionally, they—

- Perform continuous NBC IPB for impact on current and future operations.
- Maintain NBC threat information.
- Provide current and anticipated enemy NBC situation information.
- Maintain the status of NBC equipment and chemical defense equipment (CDE).
- Track NBC equipment and CDE consumption rates.
- Forecast NBC equipment and CDE requirements.
- Assist in coordinating HN NBC support.
- Assist in coordinating reconstitution operations when chemical assets are required or involved.

Chemical battle staffs must consider the impact of NBC defense operations on CSS. The decision to initiate MOPP creates a tremendous burden on the CSS system to keep soldiers in serviceable MOPP gear. The chemical battle staff must work closely with the logistician to resolve any chemical defense equipment critical shortfalls.

Chemical Units

The chemical battalion may exercise C^2 over its three to seven assigned chemical companies, which will normally be a mixture of decontamination or reconnaissance companies. Chemical teams assigned to the senior logistics headquarters provide NBC warning and reporting. Chemical units are assigned to all senior army major subordinate commands that have an AOR. They are assigned or employed as attached, OPCON, DS, GS, or on an area support basis. In the COMMZ, chemical units are assigned to the senior logistics headquarters as major subordinate units. The major chemical headquarters in the senior logistics headquarters is a chemical battalion (enhanced), which provides NBC defense and smoke support to all units in the senior logistics headquarters AOR (see Figure 14-2).

Based on the workload in the battalion AOR, chemical functional companies are assigned to chemical battalions. The workload is determined by analyzing the geographical area and the density of personnel, facilities, and equipment. If no chemical units are assigned, CSS units will request chemical support from the senior logistics headquarters. If assets are available, the senior logistics headquarters will direct the chemical battalion headquarters under its command to fulfill the requirement.

SMOKE OPERATIONS

Smoke is employed at the operational level to defeat enemy reconnaissance, surveillance, and target acquisition efforts by denying the enemy information and assisting in the defense

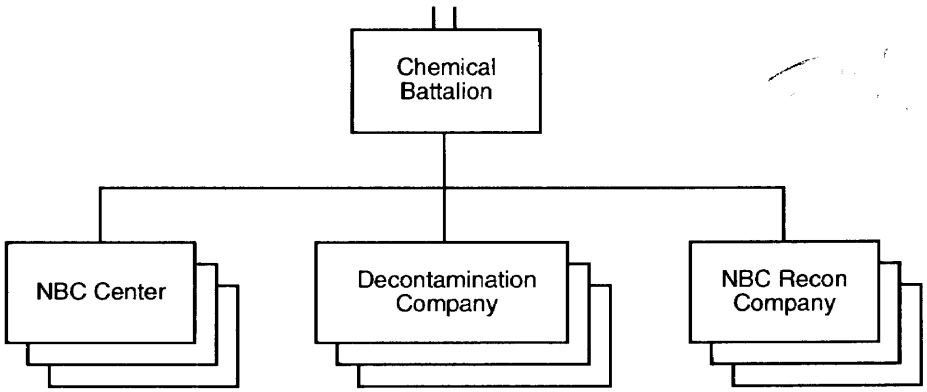


Figure 14-2. Chemical Support Structure

of operational-level activities. This in turn reduces the availability of information to threat intelligence and hence the effectiveness of threat attacks. Smoke is used primarily to defeat threat RISTA efforts and support deception operations. Smoke operations in rear areas are conducted to-

- Conceal assembly, marshaling, staging, logistical, and other vital areas.
- Conceal the movement of forces and supplies.
- Deceive the enemy.
- Reduce the effectiveness of enemy target acquisition means.
- Restrict nap-of-the-earth and contour approaches for aircraft.
- Disrupt enemy movement, operations, and C^2.
- Create conditions to surprise or deceive the enemy.

Smoke generator units will be used primarily for smoke operations at the operational level. A complete description of chemical smoke generator units and their capabilities is included in FM 3-50.

The use of smoke can be particularly effective, as it degrades the ability to see deceptive activity, forcing the threat to rely more heavily on speculation or on other means of intelligence gathering. Smoke has one general application at the operational level: screening. Screening smoke is employed on friendly activities for one of the following reasons:

- The first is to deny threat forces information about friendly activities. This type of smoke screen is significantly larger than the concealed activity to prevent revealing the activity's specific location. It is maintained continuously for long periods to prevent acquisition by frequent threat surveillance.
- The second is to prevent or reduce the effectiveness of threat attacks. Threat visual or elector-optical target acquisition and thermal guidance systems require a definite target signature. Smoke attenuates the effectiveness of these systems.
- The third is to screen a deception force operation, which confuses the enemy concerning friendly activities and complements other deceptive measures.

Chemical battalion smoke companies perform large-area smoke operations. A variable number of companies are assigned to chemical battalions based upon local situations, specific protection priorities, and available resources.

Smoke operations require detailed logistical planning. Planners determine the amount of fog oil and POL necessary for the operation. Operations exceeding two hours or back-to-back smoke missions require logistical support beyond that organic to the chemical unit.

Several techniques are used to provide continuous support. One is forward positioning

of supplies: fog oil, ammunition, and POL. A location for the smoke forward fuel point (SFFP) is determined and transportation assets or the unit itself moves supplies forward. The smoke unit moves to the pre-positioned supplies as necessary. The quantity of fog oil and other supplies stocked at the SFFP is based on the amount needed to support the mission plus one basic load for the smoke unit. This allows the smoke unit to be fully mission capable after the operation. Another technique is to configure push packages and position them at the nearest CSS activity (forward support battalion, area support group, corps support group). This activity pushes the package forward to a predetermined point.

CONTINGENCY OPERATIONS

The NBC force organization in contingency operations depends greatly on the threat. Prior to deployment, US forces are organized to operate against a sophisticated threat capable of employing NBC munitions. Based upon the actual contingency area to which deployed, the NBC force is tailored to meet the specific situation. In order to reduce the risk to forces, a nominal force organization is deployed to areas with a minimal possibility of the threat using NBC munitions.

The ASCC normally assigns NBC defense responsibilities to a subordinate unit: a COSCOM, a reinforced COSCOM, or other senior logistics organization. An important point concerning NBC responsibilities is that the area occupied by the corps includes an area equivalent to the COMMZ. The senior chemical officer, his staff, and the functional units assigned to a contingency force perform NBC missions in addition to their own.

The functions of reconnaissance, decontamination, smoke, and the NBC warning and reporting system are common to both the corps and the ASCC. The only change required in a contingency situation is a change in the number of functional chemical units assigned based upon anticipated work loads.

HOST NATION SUPPORT

The US Army must coordinate its NBC defense and smoke efforts with those of other allied forces operating in the theater. The ASCC should capitalize on HN assets to reduce the impact on the US force structure and provide for an effectively integrated force. HNS is effectively coordinated in all areas of NBC defense. The HN can support forces for NBC warning, reporting, and decontamination. In cases where smoke and decontamination activities are conducted on HN territory, HN approval is required by HN agreements.

Chapter 15

Rear Operations

The COMMZ extends from the rear of the CZ back through the rear of the theater to connect with the theater base. It includes a joint rear area to facilitate protection and operation of installations and forces that provide CS and/or CSS to combat operations. The JRA provides essential support to joint operations. Successful rear security operations are critical in this area since it contains the LOC, establishments for supply and evacuation, and agencies required for immediate support and maintenance of field forces.

THE TREAT

The threat to the theater base and COMMZ ranges from individual acts of sabotage to the insertion of battalion-size or larger forces, to air and missile attacks. Large-scale enemy attacks may require the commitment of US reserve forces, combat units from forward areas, or HN or allied resources. The potential magnitude of the threat dictates that US forces be trained to cope with threat forces when and where they attempt to interrupt COMMZ operations. They must use every appropriate active and passive measure for defense against detection from the air, attack from the ground, and compromise of their defense systems.

Three levels of response to threat activities serve as a guide for planning rear operations security. Rather than focusing on the size or type of threat, these levels focus on the nature of friendly actions needed to counter the threat. The threats listed here provide typical examples of the types of threats that can be expected.

- Level I—Those threats that can be defeated by base or base cluster self-defense measures.
- Level II—Those threats that are beyond the base or base cluster self-defense measures but can be defeated by initial response forces. Bases and base clusters are able to delay Level II threats until arrival of response forces.
- Level III—Those threats that will probably target several friendly rear elements as part of a larger, coordinated effort, rather than individual, separate entities requiring a tactical combat force to defeat them.

SUPPORT FUNCTIONS

Rear operations, which consist of activities to assure freedom of maneuver and continuity of operations, include four functions: security, terrain management, sustainment, and movement. All rear operations functions are interrelated. When planning or conducting one function, commanders and staffs must consider all the other functions, thus synchronizing rear operations. This synchronization is the ROC's responsibility.

SECURITY

Security for rear operations is vital to the success of force projection operations. Key tasks are—

- Coordinating base/base cluster defense plans.

- Collecting, integrating, analyzing, and disseminating timely and accurate intelligence.
- Aggressively patrolling, in coordination with the HN, to intercept and defeat small threat forces before they close on their objective.
- Rapidly deploying forces sufficient to counter the enemy intrusion.

TERRAIN MANAGEMENT

Units are positioned based on their mission, concept of the operation, and anticipated commitment. Factors that can affect unit positioning include current rear area IPB, METT-T, and considerations of the unit being positioned. While support units are normally positioned close to MSRs to facilitate timely support, they should not be positioned near likely enemy avenues of approach or in likely enemy landing zones or drop zones. Support units are dispersed as much as possible to minimize the effect of enemy attacks on the overall sustainment effort.

SUSTAINMENT

Synchronizing sustainment with the overall concept is critical to the success of close, deep, and rear operations. ROCs monitor sustainment operations and advise their respective commanders on security implications resulting from these efforts. Critical sustainment functions include-

- Analyzing the commander's concept and intent to develop an integrated sustainment plan.
- Recommending the positioning of support units where they can best support operations.
- Identifying those critical facilities and unit movements that require priority protection.
- Developing a support plan and coordinating support for units in the rear area.
- Monitoring the status of sustainment operations throughout the AO.

MOVEMENT

Movement in the rear area consists of theater and local movement of combat, CS, and CSS forces. This includes operational- and tactical-level movement and maneuver, support movements, and unit relocation based on changes in the tactical situation. Each type of movement must be scheduled based on command priorities to prevent congestion and support the concept of operations. Movement control units normally control movement on MSRs. ROCs control routes other than MSRs. Effective control of movements in the rear area requires synchronized planning and execution of movements by MC units, MP, the moving unit staffs, and the ROC. It also requires moving units to march discipline and adhering to highway regulations and other plans.

BATTLE COMMAND

Rear operations include those activities that allow freedom of maneuver in the COMMZ, continuity of sustainment, and uninterrupted C^2. The combatant CINC is ultimately responsible for all rear operations in a theater of operations. He normally assigns subordinate commanders the responsibility for operations in a JRA in accordance with mission requirements, force capabilities, the strategic environment, and the threat. He ensures that subordinate commanders are given authority commensurate with their responsibilities. The ASCC may be assigned the responsibility for rear operations subject to applicable HN laws and agreements. Depending on the size of the AO, it may be further delegated to the senior support headquarters, which may be the senior logistics headquarters (see Figure 15-1).

In a joint environment, the theater CINC or subordinate JFC normally designates a JRAC, who is responsible for coordinating and maintaining the overall security of the JRA as directed by the JFC. The JRAC is a critical link in coordinating security, establishing reliable intelligence and counterintelligence support, and securing communications to all forces operating in the JRA. The JRAC's overall coordination responsibility for security does not lessen the responsibility that component elements have for their own security.

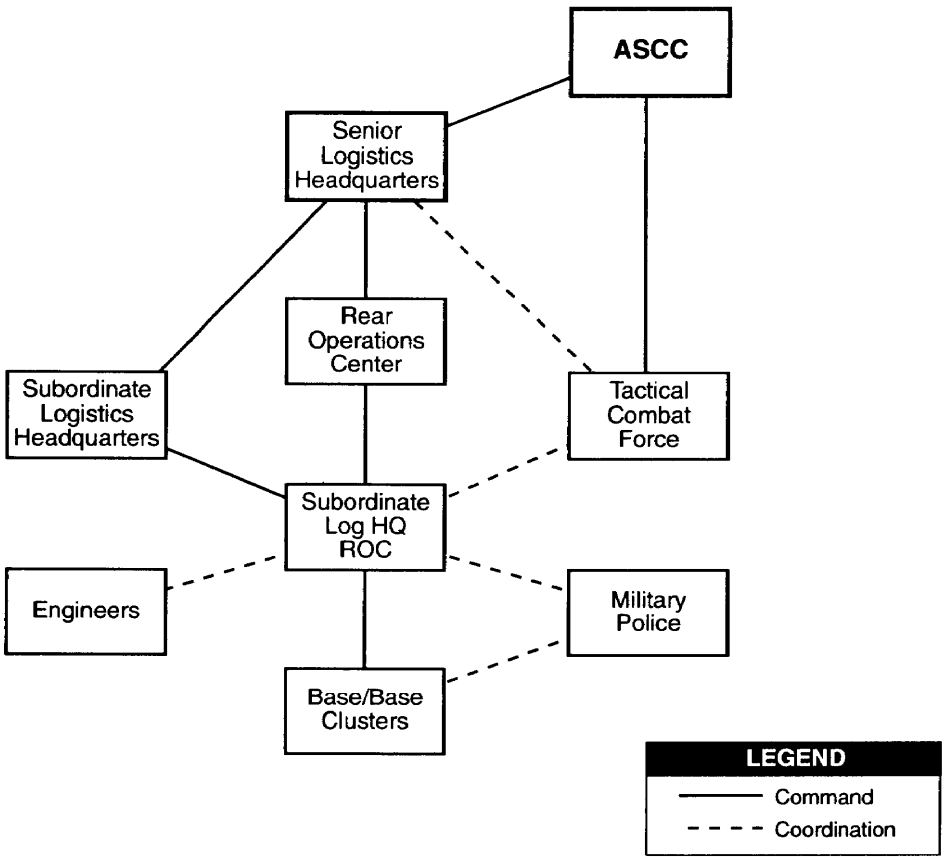


Figure 15-1. Battle Command for Rear Operations

REAR TACTICAL OPERATIONS CENTER

The senior logistics headquarters' rear tactical operations center, an element of the security plans and operations (SPO) staff, is the primary staff element for security operations. The ROC is the planning and coordination agency for the senior logistics headquarters for security operations.

SUBORDINATE SUPPORT HEADQUARTERS

Subordinate support headquarters have the responsibility for coordinating base and base cluster defense to ensure protection from Level I and II threats. In his assigned portion of the rear area, the subordinate support commander is responsible for the full range of rear operations as defined by the senior logistics headquarters and subject to applicable HN laws and agreements.

The subordinate support headquarters commander must ensure that all bases/base clusters in his AOR/AO are trained and prepared for involvement in rear operations. The execution of responsibilities requires the utmost in cooperation and coordination between the subordinate logistics headquarters and tenants. The SPO is the subordinate logistics headquarters commander's chief staff for rear operations planning and execution. The subordinate logistics headquarters ROC is the SPO's primary staff element for conducting security operations and terrain management.

BASES AND BASE CLUSTERS

The base and base cluster form the basic building block for planning, coordinating, and executing base defense operations. The ROC, in coordination with the SPO, organizes units occupying the subordinate logistics headquarters AOR into base clusters. He does this based on the SPO's requirements and recommendations for placement.

The ROC recommends to the SPO the appointment of base cluster commanders from units in the cluster. Normally, the base cluster commander is the senior commander in the base cluster. The base cluster commander forms a base cluster operations center (BCOC) from his own staff and available base assets.

Bases are formed within the base cluster (see Figure 15-2). A base is a single-service base or a joint-service base. A joint-service base is either one in which one service has primary interest or two or more services have co-equal

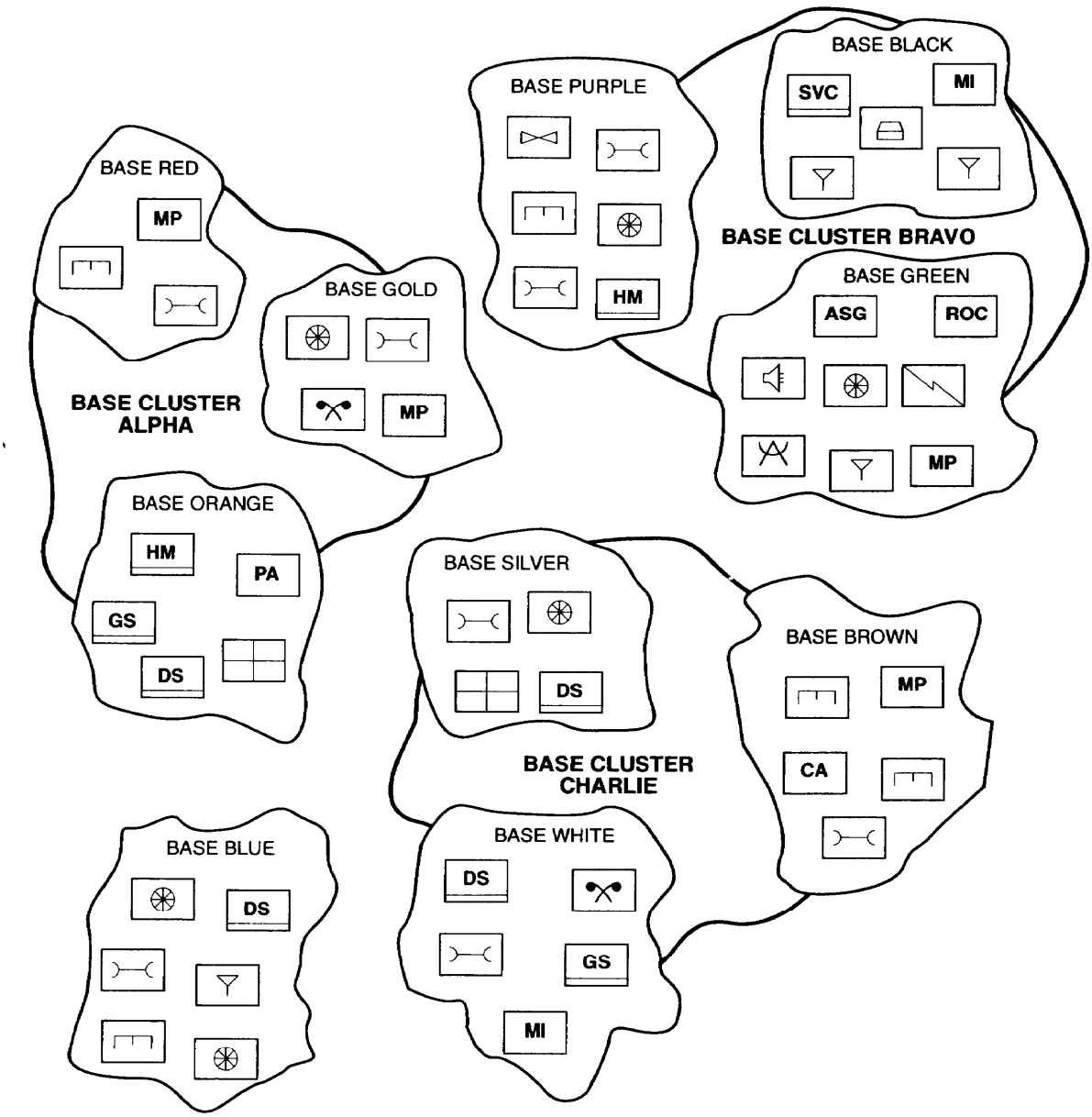


Figure 15-2. Examples of Notional Bases and Base Clusters

interests. The base cluster, in coordination with ROC, appoints the base commanders. Base commanders also form base defense operations centers (BDOC).

BASE COMMANDER

The base commander is responsible for base security and defense. All forces assigned to the base are under his OPCON for base defense purposes. The base commander's responsibilities for base defense include-

- •Establishing a BDOC from available base assets to serve as the base's tactical operations center and focal point for security and defense. The BDOC will assist with the planning, direction, coordination, integration, and control of base defense efforts.
- •Establishing an alternate BDOC from base resources or, if base assets are not available, designating a headquarters element from units dedicated to the base for its local defense.
- •Planning for the inclusion of transient units by ensuring base defense plans include provisions for augmenting the regularly assigned base defense forces present at the base during periods of threat.

BASE CLUSTER COMMANDER

The base cluster commander is responsible for securing his base, coordinating the defense of bases within his base cluster, and integrating base defense plans into a base cluster defense plan. His specific responsibilities include-

- •Establishing a BCOC from his own staff and available base or base cluster assets to serve as the base cluster's tactical operations center and focal point for planning, directing, coordinating, integrating, and controlling base cluster defense activities.
- •Providing appropriate facilities and housing for necessary liaison personnel from bases from within the cluster.

INDIVIDUAL UNIT COMMDERS

The commanders of units at a base are responsible for—

- •Participating in the preparation of base defense planning.
- •Providing, staffing, and operating base defense facilities in accordance with base defense plans.
- •Conducting individual and unit training to ensure forces' readiness to perform their assigned tasks in defense of the base.
- •Providing appropriate facilities and essential personnel for the BDOC and the base commander.
- •Providing liaison personnel to advise the base commander on matters peculiar to their units.
- •Providing for internal security of the base.
- •Providing C^3 systems, including common-user communications within the command.

RESPONSE FORCES

The senior logistics headquarters ROC may designate response forces, normally MP, to respond to bases or base clusters under Level II/III threat. The size of the response force is based on the current IPB and the commander's risk assessment. Once designated as a response force, MP, along with supported ROCs and base or base clusters, will conduct a joint IPB, review bases and base cluster defense plans, exchange signal operations instructions, and identify response forces necessary to counter likely enemy activities.

The senior logistics headquarters commander's concept and intent, established protection priorities, and the COMMZ IPB drive the response planning. Base defense and response forces incorporate this information into their own IPB and, in coordination with the senior ROCs, position themselves where they can best respond to major enemy

incursions. Should response forces encounter or engage enemy forces beyond their ability to defeat, they will immediately notify the appropriate ROC and maintain contact with the enemy until a tactical combat force can be committed.

TACTICAL COMBAT FORCES

When the threat in the rear area exceeds response force capabilities, the ROC commander requests the commitment of a tactical combat force from the ASCC. The tactical combat force usually remains under OPCON of the ASCC, although lower level commanders (senior logistics headquarters, subordinate support headquarters) may be granted this authority in special circumstances. Tactical combat forces are obtained from the following:

- Tactical units passing through the rear area to the forward-deployed force.
- Units assigned or reconstituted in the rear area. The ASCC may have units assigned to rear security operations, including an MP brigade TF based on METT-T.
- Tactical units of other service components or allies within the theater army under OPCON of the senior army commander.
- Tactical units from forward-deployed elements.
- A task-organized force from assets disembarking in the theater.

The tactical combat force is usually a combined arms organization. Senior logistics headquarters and subordinate support headquarters ROCs may attach or assign liaison teams to this tactical unit for security missions. The tactical combat force may have attached or DS artillery or attack helicopters and be task-organized by the tactical commander.

The assigned tactical combat force commander frequently uses the ROC to assist in coordinating rear security operations. The size and composition of the tactical combat force will depend upon METT-T. The senior army commander provides the tactical combat force commander with an operational plan that identifies all units under his OPCON and the boundaries of the tactical combat force's tactical AO.

The tactical combat force coordinates logistics support from support assets in the rear area through the ROC. Upon completion of the mission, the tactical combat force returns to its parent unit or reconsolidates in the rear area.

The ROC will assist the tactical combat force commander in completing all necessary coordination for the security operation. The MCA should identify and control routes, and available area MP should assist in the moves of the tactical combat force into position. When required, local security forces will brief the tactical combat force commander on the current situation.

If the HNS is viable and has retained responsibility for external base/base cluster security operations, the senior logistics headquarters or subordinate logistics headquarters ROC will coordinate with HNS for tactical combat force requirements. The HN will assign its tactical combat force to a tactical area. Depending on existing agreements, US forces within the area may also be placed under OPCON of the HN tactical combat forces.

FIRE SUPPORT

The objective of fire support at the operational level is to provide protection to the projected force and sustainment base. These fire support operations are planned and may be continued until strategic and campaign objectives are achieved. Vigilance is maintained until all forces are redeployed. This requirement is applicable to war and MOOTW.

Fire support is normally provided to rear areas on a contingency basis. There may, however, be times when fire support assets are

positioned in rear areas in preparation for a pending threat. An essential part of the planning process in rear security operations is targeting in support of bases, base clusters, and the commander's overall plan for conducting rear security operations.

Rarely are sufficient fire support assets available to simultaneously satisfy the needs of both the CZ and the rear areas. The immediate problem for the rear operations commander is manipulating limited fire support resources. Considerations that affect the application of fire support for rear area security operations are-

- The reduction of fire support to the main battle effort.
- The suitability of the fire support as determined by the overall tactical situation.
- The responsiveness of the available weapons systems.
- The precision and collateral damage effect of the weapon systems.
- The existence of a communications net to facilitate fire support activities.
- The availability of observers to identify targets and adjust fires.

The availability and timely use of fire support in security operations are critical to the overall rear area security plan. Many units and agencies located in the COMMZ have assets to detect and locate enemy forces. Some of these assets belong to the fire support units themselves. Refer to FM 6-20-30 for more information on fire support to Army corps and division operations. Other considerations for operational-level fire support for rear operations are as follows:

- Fire support organizations in ROCs may have to be formed on an ad hoc basis.
- The use of field artillery in rear operations will require on-order tactical missions.
- Army aviation or close air support is the most responsive fire support asset for use in rear areas.
- Fire support coordination measures are used to protect friendly units.
- When a brigade-size task force is committed for Level III threats, fire support will normally consist of a DS artillery unit and battalion TF mortars.

Besides the Army, other services have extensive target-acquisition capabilities, along with HN military or HN civil authorities. Commanders may use any or all of these assets to predictor respond to Level II and III threats. Rear security operations are important to the sustainment forces in the CZ and to ensure freedom of action throughout the theater.

AIR AND MISSILE DEFENSE ASSETS

The theater is provided air and missile defense protection throughout all phases of force projection operations. The operational-level Army AD element provides operational-level ADA brigades, which participate in joint DCA operations and provide protection from surveillance by UAVs and attack by lethal UAVs, cruise missiles, fixed-wing and rotary-wing manned aircraft, and TBMs.

The operational-level Army air and missile defense organization integrates Army AD activities throughout the theater of operations. Specifically, the operational-level ADA element provides air and missile defense to theater rear area critical assets. As a result, CSS buildup and sustainment activities can be conducted unencumbered. Each critical asset is evaluated to determine its priority for air and missile defense protection. The establishment of a priority is based on the threat characteristics and the criticality, vulnerability, and recuperability of the critical asset.

ADA units normally enter the theater during the early entry phase of force projection and continue to arrive during the buildup leading to decisive operations. During these activities, the priorities for air and missile defense protection to selected critical assets can change. Generally, the critical assets receive either dedicated—assigned ADA units under a standard tactical mission—or complementary ADA protection. Complementary ADA protection uses the tactical and technical characteristics of ADA

fire units to defend critical assets not receiving dedicated air and missile defense protection.

ADA units are also capable of providing air and missile defense protection to the COSCOM, DISCOM, and brigade trains. This protection is provided by using organic ADA units assigned to the corps and division. The CINC will approve the recommended critical assets to be protected in two categories: facilities and geopolitical points. Facilities identified as critical assets are:

- SPODS.
- APODS.
- C^2 headquarters.
- CSS sites and bases.
- Communication installations.
- Assembly areas.
- ADA sites.

Geopolitical points identified as critical assets are:

- Capitols (seats of government).
- Key civilian industrial areas.
- Key utility areas.
- Railroad marshaling yards.
- Population areas.
- Bridges.

The integration of the air and missile defense designs provide protection and provide the senior CSS headquarters command the flexibility to sustain the force. The benefits of this ADA infrastructure throughout the theater provide the full spectrum of air and missile defense to the CSS structure in an integrated manner. This spectrum of activities includes:

- Offensive counterair operations—to destroy the enemy TBM threat capability to detect and launch.
- Defensive counterair operations—to destroy the enemy tactical ballistic missiles and air platforms in flight.
- Battlefield management/C^4I-to provide for accurate and timely force and engagement operations.

The senior CSS headquarters ROC maintains a communications link through the required air defense coordinator. The link with the area air defense commander ensures that bases are constantly aware of the air defense status. The ROC coordinates with the area air and missile defense assets within its AOR so that it can integrate air and missile defense coverage into its planning for terrain management and MC functions.

LIAISON ELEMENTS

All services having forces located in the AOR of a subordinate logistics headquarters will provide liaison to the subordinate logistics headquarters ROC. Their primary duties are to coordinate ground defensive operations and procedures. The service element will provide appropriate communication n between its liaison officers and ROC representatives.

AIR FORCE

In addition to the tactical air control parties provided for maneuver elements, the Air Force component will provide air liaison elements to all land levels according to joint force guidance and directives.

The Air Force will normally provide an air support coordination element (ASCE) to the senior logistics headquarters ROC. The ASCE's primary duties are to assist and advise in the planning of CAS in the rear area and to coordinate the use of HNS. Liaison members monitor communications nets for subordinate logistics headquarters ROCs and selected bases and units to---

- Advise and assist unit commanders in understanding CAS capabilities, limitations, and procedures.
- Assist in preparation of the fire support annexes in operations plans of the senior logistics headquarters and subordinate logistics headquarters ROCs.
- Train senior logistics headquarters and subordinate logistics headquarters ROC personnel to implement the provision of this concept.

NAVY AND MARINE CORPS

The Navy will provide a liaison team to the subordinate support headquarters ROC or the highest land component headquarters located in the harbor. The team will provide naval expertise, intelligence, and liaison capability with naval assets to support rear security operations and to prepare naval fire support plans. In situations where Marine Corps assets are tasked to provide fire support for rear security operations, the Marine Corps element should provide a liaison element or an air naval gunfire liaison company team to the senior logistics headquarters or subordinate logistics headquarters ROC.

NONCOMBATANT EVACUATION OPERATIONS

While the theater commander must transport combat personnel and supplies into the theater, he must also ensure that noncombatants are evacuated from the theater. The ASCC and its subordinate senior logistics headquarters and functional commands are normally responsible for ensuring noncombatants are transported to departure points where they can be evacuated from the theater. The requirement to evacuate noncombatants from an area of a theater or from the theater itself can arise at any time across the range of military operations. In several areas of the world, the US has considerable numbers of forward-deployed forces. They are often accompanied by their family members. In even more areas are large numbers of government civilian employees and private citizens who need to be evacuated before or as soon as hostilities commence.

Advance warning time of situations that may require NEO are short. NEO compete with readiness activities for resources such as transportation and facilities. Therefore, they must figure prominently in transition-to-war plans. Only with extensive, detailed planning and realistic rehearsals can evacuation time be minimized.

Logistics elements play a large part in NEO. The senior logistics headquarters is a likely candidate to provide essential supplies and shelter. Medical organizations operating on an area basis provide medical and veterinary support. The senior MC organization, working closely with senior logistics headquarters and senior transportation headquarters, will plan transportation and task operators to handle it. HN resources are used to the maximum extent feasible. Military police provide security within resources.

Senior and subordinate support headquarters ROCs must comply with NEO security requirements throughout their AORs. To secure departure routes and holding areas for noncombatants, they must have identified assets. To allow for safe and expeditious evacuation with minimum exposure to ongoing or anticipated combat operations, the senior movement control organization makes the route selections while the senior logistics headquarters designates the holding areas.

RECEPTION OPERATIONS

Reception operations include the initial reception of units and equipment, the preparation of these units for combat, and their subsequent movement forward into the CZ.

The senior logistics headquarters, subordinate logistics headquarters, and functional commands are responsible for planning reception operations for units arriving in the theater. These commands also coordinate with HN for HNS required to ensure operation success.

The senior and subordinate logistics headquarters ROCs plan and coordinate security requirements. While reception operations are underway, key facilities such as APODs, pre-positioned equipment and materiel, ammunition, fuel, and personnel holding areas are defended. Planners must recognize that reception assets are high-priority targets and plan accordingly.

AREA DAMAGE CONTROL

ADC measures are those taken before, during, and after hostile action or natural disasters to reduce the probability of damage, to minimize its effects, and to aid in the continuation or reestablishment of normal operations. Repair, if necessary, occurs after the damage is controlled.

Area support groups supporting functional commanders prioritize overall ADC requirements relative to theater missions and capabilities. US engineers and HNs have a major portion of the capability to perform these tasks. The HN, depending upon agreements, may have overall responsibility for ADC. In such circumstances, the US has responsibility for ADC on bases/installations and may provide assistance to HNs for ADC missions within their capability.

Other forces and assets that contribute to the ADC mission include ordnance, MP, chemical, CA, maintenance, medical, signal, supply, transportation, and transiting units. HNS can be a vital resource for ADC in the rear area. Early HNS identification and coordination are essential to supplement ADC efforts. Responsibilities and support from HN assets will normally be negotiated at theater level and as part of the status-of-force agreements and treaties.

THEATER COMMANDER

The theater commander is responsible for ADC in the COMMZ and establishes overall priorities. These priorities generally focus on repair of damage having the greatest impact on the conduct of close and deep sustainment operations.

ARMY SERVICE COMPONENT COMMANDER

The ASCC sets and prioritizes overall ADC requirements relative to the Army's mission and capabilities. He establishes these priorities in coordination with the senior theater component commands, supported area commands, and ASCC functional commands.

LOGISTICS HEADQUARTERS

Senior and subordinate support headquarters commanders are responsible for planning ADC operations that employ assets within their areas. They must plan ADC operations through their respective ROCs. Plans identify anticipated requirements for ADC that exceed capabilities and the relative priorities of those ADC missions.

SENIOR COMMANDERS

Senior commanders of bases and installations within the COMMZ coordinate requirements for ADC with the ASCC commander. Army and Air Force commanders establish priorities for ADC missions as part of their planning process at the base or installation level. All units are responsible for providing ADC within their base/installation to the extent of their resources and capabilities.

ENGINEER COMMANDS

The senior engineer command plans, coordinates, and manages ASCC engineer missions. It plans the engineer support required to perform ADC missions according to ASCC priorities. Subordinate engineer headquarters are assigned ADC missions in a specified area. These engineer headquarters and their supported areas coordinate the development and execution of ADC plans.

The ACEM and DCEM retain responsibility for performing ADC functions beyond the capability of the bases and units in support of subordinate logistics headquarters commanders. Engineer units are assigned under OPCON of the subordinate logistics headquarters commander for specific ADC missions or periods of time.

HOST-NATION SUPPORT

The use of HNS enhances the capability of US forces to maintain successful combat operations on any battlefield. In many areas of the world, HNS is a requirement since at EACs the rear area is friendly HN sovereign territory that the US supports. Viable HNS, however, may only be available in certain areas of the world.

HNS includes civil and military assistance provided by an HN to allied forces and organizations that are located in or transiting

through HN territory. This support can include assistance in almost every aspect required to sustain military operations within a theater.

HN personnel and organizations can perform many functions as well as or better than US personnel or units because of their familiarity with the language, local customs, terrain, transportation and communications networks, facilities, and equipment. HNS requirements and capabilities vary based on the wartime requirements of the HN itself. The scope of HNS is Limited only by the availability of resources and the ability of the US and HN to reach agreements concerning their use.

HNS to allied forces and organizations is normally based on signed agreements. These agreements formalize the HN's intent and willingness to support US requirements and defined tasks, functions, operations, priorities, and procedures for HNS. Agreements permit HN, US, and allied forces to-

- Expedite provisions of requested support.
- Identify the types and quantities of available support.
- Specify conditions under which support will or will not be provided.
- Specify the status of HN civilian and military personnel committed to HNS.
- Specify the ROE beyond self-defense within designated bases and base clusters.

Operations take place in a foreign nation whose sovereignty remains viable. HNS agreements may give the HN responsibility for overall rear security operations. If the HN retains responsibility for rear security operations, the senior logistics headquarters ROC will advise the HN representative of the requirement for tactical combat forces.

The US will establish CA teams to coordinate US- and HN-related activities. Each CA team designates the points of contact for each HN civil and military echelon. The CA teams interface with appropriate US military echelons. The teams are identified by echelon from highest to lowest as follows:

- National political/military command.
- Civil/military districts.
- Military regions.
- Military subregions.

Requests for support are channeled through HNS liaison civil-military elements located at each US military echelon and CA team. This method of integrating HNS into the US force structure provides the required interface at each echelon to achieve unit effort in support of rear security operations.

HNS for rear security is characterized by centralized planning and decentralized execution. Centralized planning begins with both the HN and US commanders at each echelon. They ensure that rear security plans are combined into an area security and protection plan that complements and coincides, where possible, with established US and HN organizations, structures, political boundaries, and agreements for support, to include ROE.

The HN political command, with its military liaison counterpart, is the initial point of civil-military interface for rear security operations. Coordination at this echelon fixes responsibility and establishes measures to ensure coordination of rear security at its subordinate command levels. A common communications network operating between the CA teams and the US Army ROCs enhances integration of support.

Appendix A

The Defense Industrial Base

The budget and environmental constraints affect the size of the defense industrial base, which consists of privately owned and government-owned industrial production and maintenance facilities. A small portion of the industrial base is laid away in plant equipment packages as a cold base. Plant equipment packages contain equipment required for mobilization production that is not readily available from industry. An active production base is a cost-effective way of maintaining war reserve stocks. Preservation measures include emphasizing dual-use technology, keeping production at a trickle rate, and encouraging foreign military sales. A responsive industrial base is crucial to sustain combat forces in any future conflict.

PRIVATE INDUSTRY

The defense industrial base has limited impact in major regional contingencies and short wars due to the long lead times required to build up the industrial base. Active plants and production lines have some capability to accelerate production, that is, surge. Manufacturers and subcontractors of spare and repair parts may be able to surge production for items that sustain deployed weapons systems. Active end-item production lines are sometimes used to obtain urgent critical parts and subsystems. National policy is to make use of commercial materiel; therefore, the Army depends on private industry as the foundation for military materiel production. Private industry includes—

- Prime contractors—usually large corporations that are system integrators and assemblers.
- Subcontractors—large and small firms that manufacture components and subassemblies.
- Parts, capital equipment, and materiel suppliers.

DEFENSE AGENCIES

Government industry includes ammunition, tank and engine; arsenals; depots and other facilities; equipment; and skilled personnel. Continual research and development provide the US with a technological edge, which is necessary for a strong defense.

US ARMY MATERIEL COMMAND

To fulfill the Army's need for logistics support, USAMC operates the Army's national logistics system through its major subordinate commands and separate reporting activities. USAMC performs assigned materiel and related functions for research, development, test, and evaluation; acquisition, logistics support, and technical assistance of materiel systems; and other materiel-acquisition management functions. It provides the Army national logistics system-level maintenance support and serves as DOD's single manager for conventional ammunition. USAMC's missions are to-

- Equip and sustain a trained, ready Army.
- Provide equipment and services to other nations through the Security Assistance Program.
- Develop and acquire non-major systems and equipment.

- •Provide development and acquisition support to program managers.
- •Define, develop, and acquire superior technologies.
- •Continue and improve productivity and quality of life.
- •Maintain the mobilization capabilities necessary to support the Army.

USAMC also manages operational policies, programs, objectives, and resources associated with its worldwide Logistics Assistance Program as well as Army reserve and operational projects worldwide. All of the above functions and capabilities are available to the ASCC through the LSE.

DEFENSE LOGISTICS AGENCY

Although each service plays a large role, DLA is DOD's focal point for efforts related to the industrial base. DLA is responsible for providing consumable items of supplies and services that the military services commonly use. Its responsibilities include worldwide integrated management of subsistence, petroleum, and property-disposal operations. DLA provides logistics and service support to the services through its supply centers and agencies.

Support to the Army

DLA provides logistics support to the Army in the areas of supply support, contract administration, and technical and logistics services.

Supply Support. DLA procures, stores, and distributes items to support the military services and other customers. While many of the items may be common to more than one service, the majority of them are used by a single customer. In addition, the agency buys and distributes hardware and electronic items used in the maintenance and repair of military equipment. The military determine their requirements for supplies and materiel and establish their priorities. DLA manages in-theater supplies in the following commodity areas: fuel, clothing, construction materiel, electronic supplies, food, general supplies, industrial supplies, and medical supplies and equipment.

Contract Administration. DLA provides contract administration services to all DOD components, the National Aeronautics and Space Administration, other designated federal and state agencies, and foreign governments. These services include-

- • Contract management.
- •Preaward survey.
- •Quality assurance.
- • Contractor payment.
- •Support to small business and labor surplus areas.
- •Transportation and packaging assistance.

Technical and Logistics Services. DLA administers and supervises—

- •The Federal Catalog System.
- •The Defense Personal Property Reutilization Program, including worldwide disposal of excess personal property, recovery of precious metals, and disposal of hazardous waste.
- •The DOD Industrial Plant Equipment Reserve.
- •The Defense National Stockpile.

Reutilization and Marketing

DLA provides reutilization and marketing services in the COMMZ. Initially, salvage and excess materiel destined for the DRMO is collected in the corps and division areas as the situation permits. As the theater matures, HNS may be used to evacuate this materiel to the COMMZ for inspection, classification, and disposal by DLA-directed activities. The senior logistics organization MMC will coordinate DRMO operations for the theater army to ensure that usable materiel is not disposed of or evacuated from the theater.

US TRANSPORTATION COMMAND

USTRANSCOM provides common-user airlift, sealift, and terminal services to deploy, employ, and sustain US forces on a global basis. Its three transportation component

commands are the Army's MTMC, the Navy's MSC, and the Air Force's Air Mobility Command.

Military Traffice Management Command

MTMC is chartered to operate as the single manager for military traffic, land transportation, and common-user ocean terminals within CONUS, except for those specific SECDEF-assigned functions that require operations OCONUS. MTMC's general functions are to-

- •Provide traffic management for CONUS freight movements.
- •Command and operate common-user military ocean terminals assigned by DOD.
- •Provide worldwide traffic management for the DOD personal property movement and storage program.
- •Provide transportation planning to the JCS, unified and specified commands, and the military services in support of JOPES.

Military Sealift Command

MSC is chartered to operate as the single manager for ocean transportation between points in CONUS and overseas areas, between and within overseas areas, and for intercostal and coastalwide service within CONUS. MSC's functions are to--

- •Provide ocean transportation support to DOD components as required through US-owned or contracted equipment.
- •Serve as the single point of contact with ocean carriers concerning the negotiation of ocean rates, terms, and conditions of ocean transportation.
- •Maintain and operate an ocean transportation service for movement of personnel, cargo, bulk petroleum, and mail.
- •Provide transportation planning support to JCS, unified and specific commands, and military services in support of JOPES.

Air Mobility Command

Air Mobility Command—formerly the Military Airlift Command—is the single manager for air transportation. It consists of controlled transport aircraft and the personnel, facilities, and equipment necessary to support operations. Its general functions are to---

- •Provide airlift service support to DOD components as required.
- •Operate a worldwide passenger reservation system for travel via DOD transport aircraft, commercial contract airlift, and CRAF.
- •Operate aerial ports and air terminals at Air Force installations and commercial airfields.
- •Provide transportation planning support to JCS, unified and specified commands, and military services in support of JOPES.

GENERAL SERVICES ADMINISTRATION

GSA provides general supplies and services that are common to more than one department of the government. It has multi mission responsibility to manage the varied business activities of the federal government. GSA provides an extensive amount of supply support to DOD for such commonly used items as office furniture and supplies, machine and hand tools, photographic supplies, and so forth.

OTHER GOVERNMENT AGENCIES

Many government agencies outside of the Army have a major impact on the Army logistics system, including the Office of Management and Budget, the General Accounting Office, and the Federal Emergency Management Agency. For more detail, refer to AR 700-80.

MANAGEMENT TOOLS

The supply functions of the commodity commands are accomplished by NICPs. The maintenance functions are accomplished by national maintenance points.

NATIONAL INVENTORY CONTROL POINTS

Each commodity command has an NICP to manage those items in a commodity grouping. The NICP's functions are—

- Computing requirements.
- Directing procurement.
- Managing distribution.
- Establishing overhaul and rebuilding direction.
- Directing disposal of materiel.
- Coordinating interservice procurement and maintenance for nonconsumable items.

NATIONAL MAINTENANCE POINTS

Each commodity command has an NMP to manage maintenance of those items in its commodity grouping. The NMP's functions are--

- Technically controlling depot overhaul and repair programs.
- Managing configurations—including specifications, managing materiel changes, and reporting modifications applied.
- Developing maintenance publications such as technical manuals, modification work orders, technical bulletins, maintenance digests, safety-of-use messages, and so on.
- Determining repair parts to be provisioned as items initially issued to troop units.
- Evaluating equipment improvement recommendations.
- Training on new equipment.

Appendix B

Logistics Preparation of the Theater

The ASCC of a unified command will prepare supporting Army plans, with CSS planners concentrating on the CSS plans. Once a contingency country or geographic region is known, CSS planners begin to build a CSS information data base. When completed, the information in the data base can be used to develop a comprehensive plan for LPT. The relative priority of this effort will depend on the overall concept of operations, along with other command priorities. Because it is a complex and time-consuming function, logisticians cannot afford to wait until deployment begins to start the LPT. Anticipation by logistics planners at the national and unified command levels can preclude inserting soldiers into a completely "cold" base.

ESSENTIAL ELEMENTS OF INFORMATION

Since LPT is a relatively new concept, an explanation of the logistics-essential elements of information development process is provided. Any actions that can reduce the cost of moving supplies, equipment, and people into an objective or contingency area are candidates for inclusion in the LPT plan. Planning must provide for the timely arrival of CSS assets, which is balanced according to the mission. Strategic lift assets are extremely limited. Commanders cannot afford to squander even one sortie on movement of unnecessary supplies, equipment, or personnel. A well-thought-out LPT plan, along with the time required for proper execution, will allow better use of scarce strategic lift capability. The focus of the logistics-essential elements of information development process is on supply and field services aspects and applications; however, a detailed LPT plan will cover all logistics areas.

GEOGRAPHY

Collect information on climate and terrain in the area of operation to determine types of equipment needed and when. Use water information to determine the need for such things as early deployment of well-digging assets and water production and distribution units.

SUPPLY

Collect information on supply items that are readily available in the AO and can be used in support of US forces. Subsistence items, bulk petroleum, and barrier materials are the most common. Include information on the supported country's armed forces' supply system. Is it compatible with ours? Are major equipment items compatible? Does the HN have repair parts that support current US systems? Answers to these types of questions will assist in determining if HN support negotiations are feasible.

FACILITIES

Collect information on availability of such things as warehousing, cold-storage facilities, production and manufacturing plants, reservoirs, administrative facilities, sanitation capabilities, and hotels. Availability of such facilities could reduce the requirement for deployment. For instance, the Force Provider will house approximately 3,300 personnel. However, if space is available in a complex of hotels with the requisite support in the

required location, deployment of the Force Provider with its significant strategic lift requirements could be deferred.

TRANSPORTATION

Collect information on such things as road and rail nets, truck availability, bridges, ports, cargo handlers, petroleum pipelines, and MHE as well as traffic flow, choke points, and control problems.

MAINTENANCE

Collect information on maintenance facilities that could support US or coalition equipment. Examine the supported country's armed forces. Can they be used to supplement our capability? Does a commonality exist in such things as equipment and repair parts? Does the country have adequate machine works for possible fabrication of repair parts?

GENERAL SKILLS

Collect information on the general population of the supported country. Is English commonly spoken? Are interpreters available? Will a general labor pool be available? What skills are available that you can use? For instance, will drivers, clerks, MHE operators, food service personnel, guards, mechanics, and longshoremen be available?

OTHER

Include any other information that could prove useful, establishing other categories as needed.

SOURCES OF LOGISTICS INTELLIGENCE

An abundance of information is routinely collected on targeted theaters or likely contingency areas. Also, agencies can assist the logistician in building the information file. The sources of information listed below are only a few; the list is not all-inclusive.

THE STATE DEPARTMENT

With its worldwide embassies, the State Department's embassy staffs routinely do country studies. They also produce information on foreign countries, including unclassified pamphlets titled *Country Background Notes* and *Post Reports.* These pamphlets focus on political and economic issues, not military or logistics matters.

IPB DATA

The weather and terrain data bases in the IPB, with its overlays, provide current information that can be used in preselecting LOC and sites for logistics facilities. The IPB event analysis matrix and template (see FM 34- 130) can also be used to determine the need for route improvements and bridge reinforcements.

US ARMY CA OR CIVIL-MILITARY OPERATIONS UNITS

Whether in country or targeted on a specific country, these units can provide a wealth of logistics intelligence information. They include functional specialists who focus on particular areas, such as civilian supply, public health, public safety, and transportation.

CULTURGRAMS

Culturgrams are a series of unclassified pamphlets published by Brigham Young University that provide general/social information on specific countries. Though not focused on governmental or military interests, they provide a variety of useful information that can be used by deploying forces.

ARMY COUNTRY PROFILES

Produced by the Army Intelligence Threat Analysis Center, ACPs are classified country profiles providing information on logistics, military capabilities, intelligence and security,

medical intelligence, and military geography. They include photos, maps, and charts.

COUNTRY CONTINGENCY SUPPORT STUDIES

Produced by the Defense Intelligence Agency, these classified documents contain extensive information on railways, highways, bridges, and tunnels within a given country.

OTHER

Other assets or tools the logistics planner may want to consider as the LPT plan is developed include-

- •The use of pre-positioned materiel configured to unit sets (POMCUS).
- •Army reserve stocks.
- •Use of containerization to limit handling.
- •HNS agreements.
- •Interservice support agreements.

NOTE: If a command plans to use HNS or FNS, a primary objective must be to ensure that the internal support of the nation providing the support is not disrupted.

PLANNING FUNCTIONS

The logistics planner must not underestimate the time and resources required to accomplish many of these actions. The LPT is a living document that will be in a continual state of review, refinement, and use. It should be used as the basis for negotiations, and the ASCC should use it routinely with two major planning functions: preparing the time-phased force deployment list (TPFDL) and the Total Army Analysis process.

NEGOTIATIONS

The LPT plan should be the basis for negotiating HN support agreements; pro-positioning of supplies and equipment; civilian support contracts, both US and other country; OCONUS training programs; and humanitarian/civic assistance programs designed to enhance the development and cooperative solidarity of the host country and to provide infrastructure compensation should deployment of forces to the target country be required. The use of US forces to support other country projects is a sensitive issue. Such projects must directly support US forces' training needs that cannot be achieved elsewhere at less cost. It is incumbent on the logistics planner to ensure such efforts are appropriately coordinated and approved in advance.

THE TIME-PHASED FORCE DEPLOYMENT LIST

The LTP should be synchronized on a regular basis with the TPFDL to ensure that only the logistics capabilities that cannot be met with assurance from another source are phased into the operational area. This synchronization should take place, as a minimum, each time the LPT plan is updated to assure that only the minimum amount of strategic lift is committed to the support of logistics.

THE TOTAL ARMY ANALYSIS

The ASCC under each CINC participates in the Total Army analysis process, which identifies the number of CS and CSS organizations required to support the national strategy. This becomes the basis for resourcing decisions concerning the various force compositions —Active Army, US Army Reserves, Army National Guard, and so forth— as well as stationing plans. The Total Army Analysis process occurs on a two-year cycle, with decisions announced for implementation within six years. A current, well-developed LPT plan will enable the ASCC to make sound resourcing decisions for his AOR as well as for the Total Army.

Appendix C

The Theater Distribution System

The theater distribution system must provide the ASCC the ability to command and control the reception, distribution, and retrograde of all commodities while maintaining total asset visibility through communications and properly integrated information systems. Designed to work under a single support command in theater, it must be structured to provide responsive support and accurate information. This command may be joint and possibly multinational, if required. It must also be closely linked to the forward-deployed LSE to provide Total Army support from the national level.

FUNCTION

The theater distribution system enables US forces to request, receive, sort, maintain, distribute, retrograde, and control the flow of materiel between the point of receipt and the point of issue to using activities within the supply and transportation systems. It places emphasis on the impact of containerization on the intratheater distribution system, underpinning the organizational structure and allowing them to maximize throughput. It grants them continuous and timely visibility of systems performance measures and all units, personnel, and cargo moving within the theater. The reception, onward movement, and redeployment from and within an operational theater will also be accomplished through the theater distribution system.

DISTRIBUTION MANAGEMENT

The materiel management, MC, and support operations organizations are the overall managers of the theater distribution system. They provide the necessary interface with supply and transportation automated systems and coordinate the movement of cargo within the theater of operations. Materiel managers are responsible for maintaining a balance of stocks at each node to support the mission. Movement managers task transportation assets within the theater. Transportation assets include common-user land transportation, HN support, and contracted vehicles, watercraft, military aircraft, rail, and pipeline. Support operations personnel interface directly with the user.

The ASCC may establish a centralized distribution activity that manages the distribution of supplies and coordinates the movement of personnel and mail. Integrating with the strategic distribution system, the centralized distribution management center integrates materiel managers, MC managers, and support operations personnel from the highest level logistics command in the theater. The most critical aspect of centralized distribution management is planning and monitoring the operation to the extent that a balance of forward-positioned ASL with increased velocity minimizes stocks' depth to maintain acceptable levels of stock outage risk. The centralized distribution activity may be tailored to augment support for security assistance or peacekeeping missions or a single consolidated organization for large-scale joint and/or multinational operations. It consists of the appropriate level MC and materiel management activities that will deploy early in the deployment sequence. The overall goal of distribution management is to respond to the combatant commander's priorities and user requirements.

CENTRALIZED DISTRIBUTION ACTIVITY

The centralized distribution activity receives cargo that must be sorted before transshipment to the SSA or owning unit. The majority of cargo will arrive in 20- and 40-foot containers. Single consignee cargo and ammunition will not pass through the centralized distribution activity but will be throughput to the users or, in the case of ammunition, directly to the ammunition SSA. The centralized distribution activity is a terminal cargo transfer operation that could become a limited storage site if required. The composition of the centralized distribution activity is based on anticipated distribution requirements.

SUPPLY SUPPORT ACTIVITIES

SSAs will coordinate with local MCTs for transportation, to include retrograde of containers and flat racks to be returned to the system. The SSA is responsible for receiving and sending cargo to and from the centralized distribution activity or the POD.

UNITS

Units are the elements or nodes in the logistics system that either receive cargo from or retrograde items to the SSA or the centralized distribution activity.

PORTS OF DEBARKATION

Air or sea PODs are locations that receive and retrograde cargo and personnel. Containers are transported from the POD to the centralized distribution activity, SSA, or using unit.

CRITICAL CAPABILITIES

Capabilities that are critical to the success of a theater distribution system include TAV, communications, container handling, and transportation.

TOTAL ASSET VISIBILITY

TAV is the ability to provide timely and accurate information on the identity, status, and location of DOD materiel from the source of production to delivery to the user and ultimate disposal. Assured, reliable, and adequate communications, automation, and automation identification technology are required to achieve TAV.

COMMUNICATIONS

State-of-the-art signal support systems capable of secure and assured voice and data communications are required to implement the theater distribution system. Assured communications are defined as those between two or more users of the system that are guaranteed within a specified time and design parameters. Assured voice and data communications provide interface between elements of the theater distribution system and the global information network, ITV network, GPS, all services' automated logistics systems, and applicable C^2 systems within a time frame and at a data rate not less than the maximum possible provided by each of these external systems.

CONTAINER HANDLING

The use of containerization for all deployments magnifies the need for a responsive theater distribution system. The system must be container-supported, focusing on the receipt of containers during both unit deployment and sustainment operations. The centralized distribution activity will be responsible for maintaining the status of containers, flat racks, and 463L pallets used for transportation of materiel between CONUS and the theater of operations. The centralized distribution activity will develop policies and procedures to control containers and flat racks allocated for intratheater use to ensure proper distribution according to command priorities. Retrograde of containers will be accomplished within the theater distribution system. They may be returned to the centralized distribution activity—if the containers will be used for distribution within the theater of operations—or the port, depending on the theater's needs.

TRANSPORTATION

The theater distribution system deals with everything entering and leaving the theater, including personnel and mail and items not

presently addressed by the logistics system. Depending on the volume of personnel moving into and within the theater, dedicated transportation may be required from the APOD to the personnel replacement organization. Bus is the preferred method of transporting personnel in a nontactical environment, and, if available, HN or contracted busses should be used. Mail received at the POD will be transported directly to the responsible postal unit.

Appendix D

Logistics Support Element

Effective force projection logistics require a seamless logistics system operating across the strategic, operational, and tactical levels. Elements from CONUS and the theater of operations must work with tactical organizations to form this seamless system. The concept for the LSE evolved out of Desert Shield/Desert Storm, where it became apparent we needed a single C^2 element to centralize control personnel, call forward elements as required, and integrate these elements into the theater. The LSE spans the bridge between the strategic and tactical levels, linking the industrial bases with the operational logistics units and through the Logistics Assistance Program into tactical logistics.

MISSION

The LSE is a flexible, deployable, multifunctional organization. Largely civilian, it deploys at the request of the supported operational commander to perform traditional USAMC missions forward on the battlefield or area of operations. Its primary mission is to enhance readiness through unified and integrated application of USAMC's logistics power projection of CONUS-based technical capabilities to deployed units within any theater of operation. Primary capabilities are technical assistance, supply, and maintenance. The footprint that the LSE places in a theater is based on METT-T and the desires of the CINC. With required augmentation and resources, the LSE can perform any logistical support mission assigned. Unique skills include depot maintenance, oil analysis, calibration of test equipment, ammunition surveillance, release of pre-positioned strategic stocks, materiel fielding, technology insertion, and battle damage assessment. It operates as far forward as feasible, minimizing the evacuation of critical reparable from the theater of operations and reducing the flow of replacement materiel.

ORGANIZATION

The LSE supports the ASCC's needs, using a flexible combination of military, DOD civilian, and contractor personnel that allows it to alter its mission and size based on METT-T. Organized on a TDA, the LSE is a contingency organization with personnel battle-rostered against its requirements. The battle-rostered personnel are, for the most part, from organizations within USAMC. The logistics assistance representatives and a core of early deployers designated as *emergency-essential* will augment the LSE as the need arises. In addition, Armywide volunteers, contractors, attached units, and HNS may augment the LSE.

Existing USAMC activities in Europe and the Far East are the foundation TDAs on which the strategic LSE will deploy. Similarly, USAMC CONUS, with Logistics Assistance Office (LAO) CONUS, provides the foundation for all assigned deployments. LAOS control the logistics assistance representatives and provide technical assistance in peacetime. The foundation LSEs ensure a smooth transition from peacetime to an operational mode with no abrupt change in command relationships or mission.

USAMC's logistics support activity manages the LSE Deployment Program in peacetime and provides backup support to the

LSE during operations. It maintains the strategic TDA and coordinates deployment processing and the call forward of personnel between the deployed element and the losing unit.

COMMAND AND CONTROL

The LSE within the theater is OPCON to the ASCC. It has technical links to the senior logistics headquarters and back to USAMC, the US Army Combined Arms Support Command, the Soldier Support Center, the DLA, and the Health Care System Support Agency. OPCON allows the ASCC to identify force requirements by assigning missions and setting priorities. It allows the theater full use of the organization without imposing the burden of managing civilians. The ASCC requires a tailorable logistics C^2 element for forward elements of the national base.

PLANNING

Effective logistics support requires that strategic, operational, and tactical logistical systems merge into one seamless system. Current logistics organizations provide the management, C^2, skills, and expertise to forecast, requisition, receive, store, issue, move, distribute, maintain, evacuate, and dispose of materiel and equipment. Army planners must tailor forces to optimize deployment and employment, considering the following when deciding the proper mix of logistics support:

- Availability of active component units.
- Mobilization of *reserve* component forces.
- Funding for temporary tours of active duty for reserve component volunteers.
- Funding for contractor support.
- Capability to provide housing, messing, and logistics support.
- The threat level.
- Comparison of TOE military, DOD civilian, and contractor skills.
- Special or unique requirements.

FUNCTIONS AND RESPONSIBILITIES

LSE functions stem from the Army's logistics task to conduct prompt and sustained combat operations. When deployed into a theater of operations, the LSE provides limited depot-level-type logistics support, primarily from the COMMZ portion of the theater of operations. The LSE is the forward element of the national logistics base whose early deployment will ensure a positive link from the deploying units to the wholesale system. The LSE can fill gaps in the logistics force infrastructure or projected selected elements of the wholesale/industrial base into the theater. It can provide a C^2 structure for not only USAMC functions but also contractor, reserve component, and HNS logistics efforts. The LSE does not replace capabilities provided by other TOE organizations in the force structure.

MAINTENANCE

The LSE maintenance division performs limited depot-level and overflow maintenance. It is responsible for the repair, modification, alteration, modernization, overhaul, reclamation, or subassembly of end item components; depot-level reparable; and technical assistance to using activities. Capabilities include flexible, modular commodity- or weapon-system-oriented teams such as, but not limited to-

- Tracked, wheeled construction vehicles and equipment.
- Armaments and small arms.
- Chemical equipment.
- Quartermaster equipment.
- Communications-electronics equipment.

- Radar and digital equipment.
- Missile equipment.

The maintenance division performs the required production, planning, and control procedures to support the integrated theater maintenance program. The primary focus is on the needed repair functions to return items to the supply system or to support the reparable exchange program. Much of the required repair is at the depot level, which requires skills that are not available in TOE units. The establishment of such a repair capability could include teams that operate in one location, teams dispatched to the unit activity, or a combination.

Missiles

The in-theater missile repair activity will establish and operate forward repair activities capable of performing limited depot-level component repair and limited supply support of missile intensive management items. The activity will also provide technical assistance and support retrograde.

Army Oil Analysis Program (AOAP)

The senior AOAP member in the theater will serve as the chief of the oil analysis division. Designated laboratories test oil and grease samples and provide the results to the supported units. The chief will coordinate all AOAP requirements in theater. Equipment to be sampled will be coordinated between the LSE commander and the theater/supported commanders.

Test, Measurement, and Diagnostic Equipment

The theater coordinating office for TMDE is assigned to the LSE. The program is conducted in accordance with AR 750-25. In general, area TMDE support teams provide TMDE support for all general-purpose and selected special-purpose equipment on a divisional or geographic area support basis.

Field Assistance in Science and Technology (FAST)

LSE provides direct in-theater advice on equipment operating in theater based on environment and hostile enemy actions. The FAST office coordinates delivery of urgently needed equipment and identifies new requirements to USAMC laboratories and centers for solution. Battle damage assessment teams provide on-site support and collection of information, for example, munitions ballistic effects on armored vehicles, for use in the improvement and design of US weapon systems.

Munitions

Technical, logistical, and training emphasis includes the safety, movement, storage, maintenance, recovery and supply, and serviceability determination of ammunition. Quality assurance specialist, ammunition surveillance (QASAS) personnel provide technical assistance to ammunition units in theater in managing quality assurance and quality control operations. QASAS teams also provide technical inspection and assistance at air and sea ports when receiving or shipping ammunition. As required, the munitions division will deploy ammunition specialists and managers to coordinate accountability, perform limited renovation, assist with retrograde, and provide technical advice for demilitarization and disposal.

READINESS

The LSE readiness division manages theater aviation, missile, and other commodity programs, to include fielding, maintenance, parts provisioning, and technical assistance.

AVIATION LOGISTICS

A theater aviation maintenance program (TAMP) will be established to perform maintenance support above AVIM. The LSE aviation logistics assistance team is the depot-level activity responsible for performing maintenance in support of the TAMP. Maintenance operations may be configured into base and forward elements with the base element providing the bulk of special, high-technology repair and aviation-intensive management items support.

Depot maintenance consists of limited assembly lines to overhaul and perform major battle damage repair that requires contractor support. Special repair activities to support target acquisition and designation sight and

pilot night vision sensors will also be located at the maintenance base.

An AVCRAD may be attached to the LSE to provide maintenance support above AVIM in theater. The AVCRAD is capable of deploying to the theater and supporting the TAMP. It provides selected depot-level support, to include providing backup AVIM maintenance support; classifying and repairing components, engines, and similar items for return to the theater supply pipeline; and serving as the terminal point for shipment of aircraft in and out of the theater.

CONTRACTING

The contracting division provides contracting support needed for repair, local purchase, and leasing. Using a weapon system approach, the division manages civilian industry contractor support. This management requires a unique C^2 line, as the contracting officer, in all likelihood, will be at a CONUS-based commodity command. Each contracting officer, however, will have an individual in the theater to oversee his contractor operations. The division's role is to effect C^2, through the COR, over the various contractor-operated activities in the theater. The division provides administrative services to the CORs and coordinates the work load based on theater priorities. Theater contractor support includes—-

- •Forward repair activity—a weapon system or commodity-oriented specialized repair or maintenance activity.
- •Contractor field service representatives assigned to specific operational units.
- •Operations and maintenance personnel for new equipment field of prototype systems.

LOGISTICS ASSISTANCE PROGRAM

The LAP's goal is to improve materiel readiness. Through a worldwide network of USAMC LAOS, LAP personnel provide the LSE with the capability for on-site technical assistance to users of US AM C-fielded equipment in theater. Emphasis is on solving day-to-day problems in supply and maintenance.

LAP personnel deploy and remain with assisted forces and can operate as far forward as mission, enemy terrain, and troops dictate. LAP support consists of an LAO chief and logistics assistance representative and is tailored based on equipment types, densities, and requirements of the supported force. USAMC, DLA, or TRADOC can provide logistics assistance representatives.

FORCE RECONSTITUTION

Reconstitution of the force requires an extensive reallocation of resources and skills with the LSE. The LSE must be able to receive, identify, and determine disposition of, maintain accountability for, store, prepare for shipment, and arrange for movement to the port or a theater storage location Class I, II, III (package), IV, V, VI, and IX items.

Some of these functions can be performed by augmenting LSE personnel with contractor personnel. These personnel will be attached to the LSE, and the units will be under the OPCON of the LSE. The LSE or a contractor within the theater may repair items, or they may be sent out of the theater to a repair facility. These decisions are METT-T driven.

The theater identifies the items requiring redistribution instructions. The owning unit is responsible for arranging transportation of these items to a site identified by the LSE. These units, if directed, may also perform any other function in support of the reconstitution mission.

ARMY WAR RESERVE STOCK

The LSE is responsible for the hand-off of AWR-3 APA. This mission includes the staging and transfer of accountability of selected assets to the gaining unit. Necessary organizational and DS maintenance is the responsibility of the gaining organization. The LSE hand-off team provides additional maintenance support on AWR-3 equipment as required. This includes GS and any DS overflow to insure that hand-off and subsequent unit preparation are completed within the strategic timeframe established in the appropriate OPLANS and FM 100-17-1.

RETROGRADE/REDEPLOYMENT

The role of the LSE in retrograde/ redeployment is primarily that of assistance to the redeploying units. The LSE will, upon request by the CINC, assist in the retrograde of AWRPS stocks to the designed DS/GS maintenance facilities. This assistance may include battle damage assessment, item classification, document verification, preservation/packing/ packaging, containerization, and unit or destination staging. The same type support may be provided for the redeploying units to their home stations. The LSE retrograde mission also includes responsibility for retrograding AWR-3 APA war reserve stocks handed off early in the contingency. The LSE mission also includes transferring accountability of the stocks from the using units back to USAMC accountable records.

LIFE SUPPORT

The LSE is capable of providing a variety of life support and base operations for itself and attached units. The support includes, but is not limited to, personnel and administrative services, support operations, communications, and training.

COMMUNICATIONS

Communications capability within the LSE includes directing and controlling the installation, operation, and maintenance of C-E equipment for all means of fixed and mobile communications and automated data processing systems. LSE communications capabilities must be integrated into the theater communications architecture and tied to the theater communications net. Communications and ADP systems include:

- Dedicated satellite communications links.
- PC-based software and communications packages with STU III digital-link interface.
- ADP interface with CONUS wholesale system.
- Internal and external C-E operations with a combination of technical radios and cellular/ mobile telephones.

The LSE discussed herein provides the theater with a tailorable logistics and control headquarters. It will manage forward-deployed theater-sustaining assets. The LSE consists of modular, easily deployed organizations having multifunctional capabilities to meet force requirements until sufficient active or mobilized TOE forces are deployed to the theater.

Appendix E
Classes and Subclasses of Supply

CLASSES OF SUPPLY

	Class
Subsistence.	1
Clothing, individual equipment, tentage, organizational tool sets and tool kits, hand tools, maps, and administrative and housekeeping supplies and equipment.	II
POL: petroleum fuels; lubricants; hydraulic and insulating oils; preservatives; liquid and compressed gasses; bulk chemical products; coolants; deicing and antifreeze compounds, together with components and additives of such products; and coal.	III
Construction materials, including installed equipment and all fortification/barrier materials.	IV
Ammunition of all types, including chemical and special weapons, bombs, explosives, mines, fuses, detonators, pyrotechnics, missiles, rockets, propellants, and other associated items.	V
Personal demand items (nonmilitary sales items).	VI
Major end items: a final combination of end products that are ready for their intended use, for example, tanks, launchers, mobile machine shops, and vehicles.	VII
Medical materiel, including medical-peculiar repair parts.	VIII
Repair parts (less medical-peculiar repair parts): all repair parts and components, to include kits, assemblies, and subassemblies—reparable and nonreparable-required for maintenance support of all equipment.	IX
Materiel to support nonmilitary programs, such as agricultural economic development, not included in Classes I through IX.	x

SUBCLASSES OF SUPPLY

	Subclass
Air (Aviation, Aircraft, Airdrop Equipment):	A
•Class I—Food packet, inflight, individual.	
•Class II—Items of supply and equipment in support of aviation/aircraft.	
•Class III-Petroleum and chemical products used in support of aircraft.	
•Class V—Munitions delivered by aircraft or aircraft weapons systems.	

	Subclass
•Class VII-Major end items of aviation equipment.	
•Class IX—Aircraft repair parts.	
Troop Support Materiel— Consists of items such as water purification sets, shower, bath, laundry, drycleaning, and bakery equipment; sets, kits, and outfits (includes tool and equipment sets and shop/equipment sets for performing organization, DS, GS, and depot-level maintenance operations); sensors and interior intrusion devices; topographic equipment and related topographic products as outlined in AR 115-11.	B
Operational Rations— Includes the standard B ration, which is used for group feeding in areas where kitchen facilities, except refrigeration, are available and ration supplement sundries packs are issued in conjunction with the standard B ration until normal post exchange facilities are provided.	c
Commercial Vehicles— Includes wheeled vehicles authorized for use in administrative or tactical operations.	D
General Supply Items— Includes administrative expendable supplies such as typewriter ribbons, paper, cleaning materials, and other supplies normally referred to as office supplies; also includes publications distributed through AG channels.	E
Clothing and Textiles— Includes individual and organizational items of clothing and equipment authorized in allowance tables and tentage/tarpaulins authorized in TOE or other media.	F
Communications-Electronics- Includes signal items such as radio, telephone, satellite, avionics, marine communications and navigational equipment; tactical and nontactical ADPE; radar; photographic, audiovisual, and television equipment; and electronic sensors.	G
Test, Measurement, and Diagnostic Equipment— Includes items of equipment used to determine the operating efficiency of, or diagnose incipient problems in, systems, components, assemblies, and subassemblies of materiel used by the Army.	H
Tactical Vehicles— Includes trucks, truck tractors, trailers, semitrailers, and personnel carriers.	K
Missiles— Classes H, VII, and IX include guided missile and rocket systems such as Patriot, MLRS, and Avenger. Class V includes guided missile ammunition items.	L
Weapons- Includes small arms, artillery, fire control systems, rocket launchers, machine guns, air defense weapons, and aircraft weapon subsystems.	M
Special Weapons	N
•Class V—Includes nuclear and thermonuclear munitions.	
•Class VII-Includes weapon systems that deliver nuclear munitions.	
•Class IX—Includes repair parts for Class VII-N.	

	Subclass
Combat Vehicles— Includes main battle tanks, recovery vehicles, self-propelled artillery, armored cars, and tracked and half-tracked vehicles.	0
US Army Intelligence and Security Command Materiel— Includes that materiel for which the US Army Intelligence and Security Command has responsibility. Normally authorized in classified authorization tables. Although USAINSCOM items are electronic, they are identified separately because they do not follow the same supply and maintenance channels as subclass G.	P
Marine Equipment— Includes marine items of supply and equipment such as amphibious vehicles, landing craft, barges, tugs, floating cranes, and dredges.	Q
Refrigerated Subsistence— Consists of two categories of refrigeration—that which is required to be maintained at 0^0F to keep frozen meals and foods for extended periods and that which is to be maintained at approximately 40^0F to keep perishables in A rations—such as fruits, vegetables, and eggs—for shorter periods	R
Nonrefrigerated Subsistence-- Includes items in standard B rations and nonperishable items in A rations.	S
Industrial Supplies— Common supplies and repair parts such as shop stocks, hardware, and fabrication-type items generally having multiple uses. The Defense Industrial Supply Center generally manages such items.	T
COMSEC Material— This subclass is identified separately from subclass G because of specialized supply and maintenance functions performed through a dedicated COMSEC logistics system.	U
Ground— •Class I - Water—When delivered as a supply item. •Class III—Includes petroleum/chemical products and solid fuels used in support of ground and marine equipment. •Class V - Conventional munitions—Consists of chemical smoke and illuminating, incendiary, riot control, and improved conventional munitions. •Classes II, VII, and IX—Consist of construction/ road-building and materials-handling equipment.	W
In Class— Indicates no subclass assigned.	X
Railway Equipment— Includes rail items of supply and equipment such as locomotives, railcars, rails, rail joining, and shifting equipment.	**Y**
Chemical **Classes II—** Battledress overgarments, M256 chemical detector kits. VII-Protective masks and smoke generators; and IX—Protective mask filters, protective mask carriers or individual decontamination kits.	Z

	Subclass
For Class III, the following subclasses also apply:	
Air, Bulk Fuels— Includes jet fuels and aviation gasolines, normally transported by pipeline, rail tank car, tank truck, barge, coastal or oceangoing tankers, and stored in a tank or container having a fill capacity greater than 500 gallons.	1
Air, Packaged Bulk Fuels— Includes fuels in subclass 1 which, because of operational necessity, are generally packaged and supplied in containers of 5- to 55-gallon capacity, except fuels in military collapsible containers of 500 gallons or less which will also be considered as packaged fuels	2
Air, Packaged Petroleum Products— Includes aircraft-unique petroleum and chemical products consisting generally of lubricating oils, greases, and specialty items normally packaged by the manufacturer and procured, stored, transported, and issued in containers or packages of 55-gallon capacity or less.	3
Ground, Bulk Fuels— Includes motor gasoline, diesel, kerosene, and heating oils normally transported by pipeline, rail tank car, tank truck, barge, coastal or oceangoing tankers, and stored in a tank or container having a fill capacity greater than 500 gallons.	4
Ground, Packaged Bulk Fuels— Includes ground bulk fuels which, because of operational necessity, are generally packaged and supplied in containers of 5- to 55-gallon capacity, except fuels in military collapsible containers of 500 gallons or less which will also be considered as packaged fuels.	5
Ground, Packaged Petroleum— Includes petroleum and chemical products, generally lubricating oils, greases, and specialty items normally packaged by the manufacturer and procured, stored, transported, and issued in containers of 55-gallon capacity or less.	6
Ground, Solid Fuels— Includes coal, coke heating tables, or bars.	7
For Class VIII, the following subclasses apply:	
Controlled substances.	1
Tax-free alcohol.	2
Precious metals.	3
Nonexpendable medical items, not restricted.	4
Expendable medical items, not restricted.	5
Commander-designated controlled items.	6 through 9
US Army Medical Materiel Agency controlled sensitive items.	0

Appendix F

Digitization

Digitization of the battlefield is the insertion of digital technologies across all levels and within both combat and support organizations. It depends on the integration of numerous elements, including computer processing, advanced software, displays, sensors, communications, and position/navigation components. The advantages of digitization include enhanced C^2 resulting from a common picture of the battlefield, improved situational awareness, better compatibility across battlefield operating systems, and shorter decision cycles.

IMPLICATIONS FOR SUPPORT

The support commander will have the C^2 advantages of near-real-time knowledge of location and status of friendly forces. Also, improved awareness of enemy elements will enhance his capability to ensure the survivability of support elements. However, beyond the C^2 and security advantages, digitization leads to actual enhancements to the operational support process. Some benefits result from the increased speed and volume of data available as the system moves from analog to digital systems. However, Army operational support improvements from digitization can go beyond those obvious advantages. The most significant benefits accrue from the vertical and horizontal technological integration of digitized systems.

Vertical integration involves the passing of digital data through echelons. Digitized data will enter the system at the lowest level possible whenever feasible. Vertical integration of fully digitized systems will eliminate the requirement for manual processing and for re-entry of data at different levels as information moves from supported elements to supporter elements and through the various echelons. This process will provide operational support planners and operators more detailed, accurate, and up-to-date information on the status and requirements of supported forces. With this information, they will be better able to anticipate and meet the needs of the force. Enhanced anticipation and control improve the capability of support personnel to push support to forces based on projected needs. This capability is especially critical in early stages of operations before the theater base is fully established.

Horizontal integration involves the use of various technologies to integrate digital data among combat, CS, and CSS elements. Integration for CS and CSS personnel has several interrelated aspects. First, they will have the same picture of the battlefield as the combat leaders. This common picture, gained through such techniques as electronically transmitted orders and graphical overlays, will enable them to better and more quickly accomplish what they always strive for—the integration of operations and support plans. The tactical commander will have better knowledge of the support situation and its implications for mission accomplishment.

Another aspect of horizontal technological integration for CS and CSS personnel consists of integration of information along CS and CSS personnel at a given level. Digitizing the support system cannot be confined to digitizing each of the functional analog processes of the current system and refining their uses. It must seek to develop new, fully integrated digital systems. Work is progressing on the development of a single integrated CS and CSS STAMIS, as mentioned in Chapter 8. Current

stand-alone functional systems will eventually be blended into a single seamless automated system. The integrated functions will ultimately include not only supply, transportation, and maintenance, but also medical, personnel, and finance support. Integration of these functions will provide a near-real-time comprehensive view of the CS and CSS situation, not only to support elements but also through the Army Battle Control System to all commanders. This integrated system, along with the application of automatic identification technology-such as radio frequency identification—and communications both within the theater and between the theater and the sustaining base will enable the achievement of total asset and in-transit visibility.

SUPPORT TO DIGITIZED SYSTEMS

In addition to the enhanced capabilities that digitization provides to the support system, the digitized system itself will eventually require some changes in support. For example, manning may be affected in that skill requirements may be different. In fact, for certain functions—for example, development of resource requirements and report preparation—automated capabilities may replace activities currently performed by soldiers. Also, the various hardware and software components of the digitized systems will require changes to maintenance requirements.

STAGES OF DIGITIZATION

Planners must take into account intermediate stages in the development and fielding of digitized systems. Not all elements of a force supported by a CS or CSS unit maybe at the same stage of digitization. This will be especially true if the supported force is joint, multinational, and/or interagency. Therefore, CS and CSS planners must develop plans to receive status reports and requirements from fully digitized forces as well as from elements with lesser capabilities. Similarly, support activities at a given echelon and across the various levels may be at different stages of digitization. They will need to ensure plans to pass data that addresses the various types of systems. Soldiers will need to maintain proficiency in operating and maintaining older systems as well as gaining expertise on digitized systems. This will require additional training.

Glossary

A

AADC	area air defense coordinator
AADCOM	Army Air Defense Command
AADCOORD	Army air defense coordinator
AAFES	Army/Air Force Exchange Service
ABCC	airborne battlefield command and control
ABL	ammunition basic load
ABPO	Army blood program officer
AC	active component
ACE	analysis and control element
ACEM	area contingency engineering manager
ACO	administrative contracting officer
ACOM	Atlantic Command
ACP	Army country profiles
ACR	armored cavalry regiment
ACUS	area common-user system
AD	air defense
ADA	air defense artillery
ADC	area damage control—Measures taken before, during, and after hostile action or natural or man-made disasters to reduce the probability of damage and minimize its effects.
ADCON	administrative control
ADDS	Army Data Distribution System
ADP	automatic data processing
ADPE	automatic data processing equipment
AE	aeromedical evacuation
AECC	aeromedical evacuation control center—An Air Force organization responsible for originating, in-transit, or designation medical facilities that coordinate aeromedical activities.
AELT	aeromedical evacuation liaison team
aerial POD	aerial port of debarkation—An airfield in a theater of operation used to resupply personnel and equipment to an operating military force. The airfield is normally manned at a sufficient level to process personnel into the replacement stream and handle and distribute air freight cargo.

AES	airdrop equipment support
AFFS	Army field feeding system
AIFA	AAFES imprest fund activities
AJBPO	area joint blood program office
AJMRO	area joint medical regulating office
ALOC	air lines of communication—Air routes that connect an operating military force with a base of operations.
ALOC items	Material that is routinely airlifted regardless of issue priority group, that is, low-density Class IX repair parts and maintenance-related Class II items.
AML	area medical laboratory
ammunition basic load	The quantity of nonnuclear ammunition authorized to be on hand in a unit to meet combat needs until resupply can be accomplished. The ASCC specifies the basic load; it is expressed in rounds-per-weapon for each type of ammunition a weapon is authorized to fire. Each weapon in a maneuver unit, from a rifle to a tank, has a basic load. Other units of measure—like three fragmentation grenades per individual—are used for bulk authorizations of ammunition items that are not fired by weapons. The total of all the individual types of ammunition authorized per weapon or in bulk makes up a unit's basic load.
ammunition supply point	Advance point at which ammunition is available for distribution to using units on an area basis, or for distribution by a unit to individuals or subordinate units. Normally, an ordnance unit organic to the corps operates it.
AMO	automation management office
AMSF	area maintenance and supply facility
ANGLICO	air and naval gunfire liaison companies
AO	area of operations—A geographical area assigned to an army commander by a higher commander. An AO has lateral and rear boundaries, which usually define it within a larger joint geographical area.
AOAP	Army Oil Analysis Program
AOD	area-oriented depots
AOR	area of responsibility—A defined area of land in which responsibility is specifically assigned to the commander of the area for the development and maintenance of installations, control of movement, and conduct of tactical operations involving troops under his control, along with parallel authority to exercise these functions.
APA	Army pre-positioned afloat
APOD	aerial port of debarkation
APOE	aerial port of embarkation
ARC	American Red Cross
	Army force

Army Reserve stocks	The assets designated to satisfy the pre-positioned war reserve material requirement, consisting of overseas war reserves that include theater war reserves to support initial combat consumption; DA-approved operational stocks in overseas commands, including POMCUS; and CONUS war reserves under the control of Army managers.
ARNG	Army National Guard
ARSOF	Army special operations forces
ASBPO	Armed Services Blood Program Office
ASCC	Army service component commander—The senior Army commander of an Army service component command assigned to a unified command, who performs UNAAF-assigned service functions for the Army forces within the command, as well as three strategic and operational-level roles: establishing linkages, conducting operations, and conducting support operations. The ASCC functions in both the operational and service chain of command.
ASCE	air support coordination element
ASF	aeromedical staging facilities
ASG	area support groups
ASL	authorized stockage list
ASMB	area support medical battalion
ASMC	area support medical company
ASMRO	Armed Services Medical Regulating Office—A jointly staffed organization that coordinates all intertheater patient evacuation and designates the CONUS hospital to which each patient will be evacuated.
ASOTSE	Army special operations theater support element
ASP	ammunition supply point
ATBM	anti-tactical ballistic missiles
ATMCT	air terminal movement control team
ATP	ammunition transfer point—A point established in the brigade support area to reduce the travel distances of resupply vehicles. Initial stockage for each brigade ATP is positioned on COSCOM stake and platform semitrailers and consists of high-volume/high-tonnage items as determined by the division ammunition officer and the division commander.
AUTODIN	automatic digital network
AVCRAD	aviation classification repair activity depot—An ARNG TDA organization responsible for selected depot-level and backup-level AVIM and ARNG aircraft. Upon mobilization, the AVCRADs become AMC elements that will augment the CONUS depot system. When deployed, they provide depot- level and backup AVIM support in the theater of operations.
AVIM	aviation intermediate maintenance

AVUM aviation unit maintenance

AWR army war reserve

AWROP army war reserve operational project

AWRPS army war reserve pre-positioned sets

AWRS army war reserve sustainment

B

BAS battlefield automated systems

battle command The art of motivating and directing soldiers and their organizations into action to accomplish missions; includes visualizing a future state and formulating concepts of operations to achieve that state, assigning missions, prioritizing and allocating resources, and selecting the critical time and place to act.

evacuation The process of moving wounded, injured, or ill personnel from a battlefield and subsequently along the medical chain of evacuation. The zone of responsibility for battlefield evacuation normally lies to the front of medical units.

BB break bulk

BBP break-bulk points

BCC battlefield circulation control—The enforcement of the rules of the road, traffic regulations, and road discipline, including spot direction. It is a function of the provost marshal and military police.

BCOC base cluster operations center

BDA battle damage assessment

BDAR battle damage assessment and repair

BDCT base defense coordination team

BDOC base defense operations center

BDP base development plan

bed down Provisions of expedient facilities to meet the wartime needs of in-place and deployment forces.

BIDS Biological Identification Detection System

BOS battlefield operating system

C

C^2 command and control

C^3 command, control, and communications—Command and control functions performed through the arrangement of personnel, equipment, communications, facilities, and procedures that provide for direction of combat operations.

C^3I command, control, communications, and intelligence

C^4	command, control, communications, and computers
C^4I	command, control, communications, computers, and intelligence
CA	civil affairs
CAISI	CSS automated information system interface
cannibalization	The authorized removal of parts or components from uneconomically reparable or disposable end items or assemblies to make them available for reuse.
CC	collection and classification
CCL	combat-configured load
CCP	container consolidation point
CD	civil defense
CDE	chemical defense equipment
CEB	clothing exchange and bath
CENTCOM	Central Command
CESP	Civil Engineer Support Plan
CFC	Combined Forces Command
CHE	container-handling equipment
CHS	combat health support
CI	counterintelligence
CINC	commander in chief
civilian reserve air fleet	Aircraft belonging to commercial air carriers that the DOD has designated to transport military supplies, equipment, and personnel in times of national emergency.
CJCS	Chairman, Joint Chiefs of Staff
CMMC	corps materiel management center
CMO	civil-military operations
CNR	combat net radio
COA	course of action
COCOM	combatant command—One of the unified or specified commands established by the President; nontransferable authority established by Title 10, *USC*, Section 134, and exercised by combatant commanders (COCOM provides full authority to organize and employ commands and forces as the CINC considers necessary to accomplish assigned missions); the authority to perform those functions of command over assigned forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction over all aspects of military operations, joint training, and logistics necessary to accomplish the missions assigned to the command.
COM	casualty operations management

combatant commander A CINC of a combatant command.

combat engineering Those activities on the battlefield that enhance friendly mobility and survivability and that counter enemy mobility.

command, control, and information system An integrated system composed of doctrine, procedures, organizational structure, personnel, equipment, facilities, and communications that provide authorities at all levels with timely and adequate data to plan, direct, coordinate, and control their operations.

communications A method or means of conveying information of any kind from one person or place to another.

COMMZ communications zone—The rear part of the theater of operations that contains the LOC, establishments for supply and evacuation (theater logistics bases, forward operating bases), and other agencies required for the immediate support and maintenance of the field forces. The COMMZ extends back to the CONUS base.

COMSEC communications security

construction The building of facilities, including force bed down, new construction, emergency war damage repair, and restoration.

consumer logistics That aspect of logistics that deals with materials after production and initial delivery by the producer and includes such functions as storage, movement, distribution, and maintenance.

An emergency involving military forces caused by national disaster, terrorists, subversives, or by required military operations. Due to the uncertainty of the situation, contingencies require plans, rapid response, and special procedures to ensure the safety and readiness of personnel, installations, and equipment.

CONUS continental United States

COSCOM corps support command

CP command post

CRAF civil reserve air fleet

CRC CONUS replacement centers—A portion of the wartime Army replacement system used for marshalling nonunit personnel in preparation for deployment.

critical supplies Those supplies vital to supporting operations that, owing to various conditions, are in short supply or are expected to be in short supply.

CS combat support—Fire support and tactical assistance provided to combat elements. May include artillery, helicopter, engineer, MP, signal, and electronic warfare.

CSC combat stress control

CSH combat support hospital

CSP contracting support plan

CSS combat service support—The focus of logistics at the tactical level of war; the synchronization of essential functions, activities, and tasks necessary to sustain soldiers and their weapons systems in an area of operations; includes but is not limited to that support rendered by service support troops to arm, fuel, fix, move, and sustain soldiers and their equipment.

CSSAMO combat service support automation management office

CTA common table of allowances

CTASC-II corps/theater ADP center, phase II

CV combat vehicle

CVRT criticality, vulnerability, recuperability, and threat

CZ combat zone—That area required by combat forces to conduct operations, it is the territory forward of the highest Army command echelon.

D

DA Department of the Army

DAAS Defense Automated Address System

data base 1. A set of data, part or the whole of another set of data, and consisting of at least one file that is sufficient for a given purpose or for a given data-processing system. 2. A collection of data fundamental to a system. 3. An organized set of evaluated mapping, charting, and geodetic data stored in either graphic, textural, or digital form. A data base may contain one file of data, for example, terrain elevation data, or several data files, for example, cartographic, geodetic.

DCA defensive counterair

DCEM district contingency engineering manager

DCG deputy commanding general

DCS Defense Communications System

DCSLOG deputy chief of staff for logistics

DCSPER deputy chief of staff for personnel

DCSRM deputy chief of staff for resource management

DDN Defense Data Network

deployment The movement of forces within areas of operations; the positioning of forces into formation for battle; the relocation of forces and materiel to desired areas of operations.

DFSA designated finance support activity

DFSC defense fuel supply center

direct support The computer software to be used on decentralized,

supply system	automated service support system hardware.
DIRLAUTH	direct liaison authorized
DISCOM	division support command
DISE	deployable intelligence support element
distribution system	A complex of facilities, installations, methods, and procedures designed to receive, store, maintain, distribute, and control the flow of military materiel between the point of receipt into the military system and the point of issue to using activities and units.
DLA	Defense Logistics Agency
DMA	Defense Mapping Agency
DMMC	division materiel management center
DNBI	disease nonbattle injuries
DOC	directorate of contracting
DOD	Department of Defense
DODIC	Department of Defense identification code
DRMO	Defense Reutilization Marketing Office
DS	direct support
DSN	Defense Switched Network
DSS	direct supply support
DSU	direct support unit
DTS	Defense Transportation System
DWCM	district wartime construction manager

E

EAC	echelons above corps
EAD	echelons above division
ECCM	electronic counter-countermeasures
EMP	electromagnetic pulse
ENTO	entomology
EOD	explosive ordnance disposal
EODCT	explosive ordnance disposal control team
EPLRS	Enhanced Position-Location Reporting System
EPW	enemy prisoners of war
EUCOM	European Command
evacuation, health services	Moving any wounded, injured, or ill person to and/or between medical treatment facilities.
EW	electronic warfare

F

F&A finance and accounting

FAAD forward area air defense

FAADS Forward Area Air Defense System

FAST field assistance in science and technology

FID foreign internal defense

field rations, type A The type A ration consists of nonperishable and perishable items and is not used in a theater until the ASCC determines that the logistics system can support a perishable ration and DA approves its use. Usually this occurs only when the situation requires the presence of US forces for more than six months. Even when perishable rations are available, the tactical situation in parts of the theater may still require the use of nonperishable and operational rations.

field services Logistical soldier-sustainment functions such as food preparation, water purification, bakery, clothing, and light textile repair, laundry and bath, airdrop and parachute rigging, and mortuary affairs.

FLOT forward line of own troops

FMSP Foreign Military Sales Program

FNS foreign nation support

follow-on construction Upgrade of an expedient facility, normally 30-90 days after a bed-down project.

follow-on restoration Upgrade of emergency repairs, normally to the original condition of the facility.

force projection The movement of military forces from CONUS or a theater in response to requirements of war or MOOTW. Force projection operations extend from mobilization and deployment of forces, to redeployment to CONUS or home theater, to subsequent demobilization.

forward presence Those US active component and reserve forces assigned or deployed overseas in a specific theater.

G

general engineering Missions that do not contribute directly to the mobility, countermobility, and survivability of committed maneuver units, but are essential for firepower and logistics support.

GH general hospital

GP general purpose

GPS global positioning system

GS general support

GSA General Services Administration

GSSB general support supply base

GSU general support unit

H

HA humanitarian assistance

HCA head of contracting activity

health services The logistical function of promoting, improving, conserving, or restoring the mental or physical well-being of military personnel.

HEMTT heavy expanded mobility tactical truck

HETS-T heavy equipment transporter system trailer

HIMAD high- to medium-altitude air defense

HN host nation—A nation in whose territory US or allied forces are operating or supporting an operation.

HNS host nation support—Civil and military assistance rendered by a nation to foreign forces within its territory during crisis, in peacetime, or war; assistance provided during these operations is based upon agreements mutually concluded between nations.

HQDA Headquarters, Department of the Army

HSLS Health Service Logistics System

HSS health services support

I

IEW intelligence and electronic warfare

IHFR improved high-frequency radio

INGO international nongovernment organizations

installation A fixed or relatively fixed location together with its real estate, buildings, structures, utilities, and equipment.

integrated logistics support A composite of all the support considerations necessary to assure the effective and economical support of a system for its programmed life cycle. It is an integral part of all other aspects of system acquisition and operation.

IPB intelligence preparation of the battle

IPG-1 Issue Priority Group 1

ISB intermediate support base

ITO installation transportation office

ITV in-transit visibility—The intermediate availability of data pertaining to the location of materiel in transit from the provider to the requester.

J

JAG judge advocate general

JBPO joint blood program officer

JCS Joint Chiefs of Staff

JFACC joint force air component commander

JFC joint force commander—In general, applies to the CINC and those of his subordinates who control forces of more than one service.

JFLCC joint force land component commander

JMC joint movement center

JMRO Joint Medical Regulating Office—The unified command office that regulates the movement of patients between various medical treatment facilities of the armed services.

JOA joint operations area

joint force A general term applied to a force that is composed of significant elements of the Army, Navy, Marine Corps, and Air Force, or two or more of these services and operating under a single commander authorized to exercise unified command or operational control over them.

JOPES Joint Operations Planning and Execution System

JPO joint petroleum office

JRA joint rear area—A specific land area within a JFC's AO designated to facilitate protection and operation of installations and forces supporting the joint force.

JRAC joint rear area coordinator

JSOA joint special operations area

JSOTF joint special operations task force

JTB joint transportation board

JTF joint task force—A force composed of assigned or attached elements of two or more services, which is constituted by appropriate authority for a specific or limited purpose or missions of short duration.

JTIDS Joint Tactical Information Distribution System

L

LAN local area network

LAO logistics assistance office

LAP Logistics Assistance Program

LCA logistics control activity

LID light infantry division

LNO liaison officer

LOC lines of communication—All the routes (land, water, air) that connect an operating military force with a base of operations and along which supplies and military forces move.

lodgment A designated area on hostile or potentially hostile territory that, when seized and held, ensures the continuous landing of troops and materiel and provides maneuver space requisite for subsequent projected operations.

LOGCAP Logistics Civil Augmentation Program

logistics The process of planning and executing the movement and sustainment of operating forces in military operations. Logistics includes the design and development, acquisition, storage, movement, distribution, maintenance, evacuation, and disposition of materiel; the acquisition, preparation, maintenance, equipment, movement, evacuation, and hospitalization of personnel; the acquisition or furnishing of services; and the acquisition or construction, maintenance, operation and disposition of facilities; the acquisition of food services and field feeding. Logistics is an overarching function that must encompass the range of military operations. At the tactical level, logistics focuses on the traditional CSS functions of arming, fixing, fueling, manning, moving, and sustaining soldiers.

logistics bases A principal or supplementary base of support; a locality containing installations that provide logistics or other support.

LOGMARS logistics application of automated marking and reading symbols

LOGNET logistics data network

LOTS logistics-over-the-shore—The loading and unloading of ships without the benefit of fixed port facilities.

LPT logistics preparation of the theater—Actions taken to optimize the means (force structure, resources, and strategic lift) of logistically supporting the commander's plan.

LRC lesser regional contingency

LRSU long-range surveillance unit

LSE logistics support element

M

MACOM major command

MASF mobile aeromedical staging facility

MASH mobile army surgical hospital

MASINT measurement and signatures intelligence

materiel management The supervision of supplies and equipment throughout strategic-, operational-, and tactical-level areas of operation.

MC movement control—The planning, routing, scheduling, and control of personnel and freight movements over LOC.

MCA movement control agency—US theater army organization responsible for coordinating and administering transportation policy. The functional element under the theater army MCA for movement control is the theater Army MCC.

MCC movement control center

MCT movement control team

MEDCOM	medical command
MEDEVAC	medical evacuation
MEDLOG	medical logistics
MEDPAR	medical patient accounting and reporting
MEDREG	medical regulating
METT-T	mission, enemy, terrain, troops, and time available
MHE	materials handling equipment
MI	military intelligence
MMC	materiel management center
MOA	memorandum of agreement
modular units	Units having multiple capabilities; depending on the requirements, modules can be added or subtracted from the unit or force package.
MOOTW	military operations other than war
MOPP	mission-oriented protective posture
MOU	memorandum of understanding
MP	military police
MPAD	mobile public affairs detachments
MPRJ	military personnel records jacket
MRC	major regional contingency
MRE	meal ready to eat, individual—One of 12 basic individual meals used during combat operations.
MRO	medical regulating officer
MSC	Military Sealift Command
MSE	mobile subscriber equipment
MSR	main supply route
MST	maintenance support team
MTF	medical treatment facility
MTMC	Military Traffic Management Command
multinational command	A unification of two or more forces, or agencies of two or more allies under one commander. (When all allies or services are not involved, the participating nations and services shall be identified.)
multinational operations	Diplomatic-military actions between two or more agencies, with armed forces of two or more nations, to achieve the strategic end state. Alliances or coalitions can be formed to carry out these operations conducted by forces of two or more nations acting together to accomplish a common mission.
MWR	morale, welfare, and recreation

N

national industrial base — The private and government production and maintenance capacity that could be used to manufacture and repair items required by the military services.

nation assistance — Diplomatic, economic, informational, and military cooperation between the US and the government of another nation, with the objective of promoting internal development and the growth of sustainable institutions within that nation. This corrects conditions that cause human suffering and improves the quality of life of the nation's people.

NAVFACENGCOM — Naval Facilities Engineering Command

NBC — nuclear, biological, chemical

NBCRS — Nuclear, Biological, and Chemical Reconnaissance System

NCA — National Command Authorities

NEO — noncombatant evacuation operations

new construction — The provision of a facility to a standard greater than expedient.

NGO — nongovernmental organization

NICP — national inventory control point

NMCS — nonmission capable supply

NMP — national maintenance point

non-ALOC items — Those items of supply that are oversized or of high weight and therefore not normally airlifted to an operating military force; includes all classes of supply except ALOC Class IX and selected items of Class II.

NSL — nonstockage list

O

OCA — offensive counterair

OCONUS — outside the continental United States

OEM — original equipment manufacturer

OPCON — operational control—The authority delegated to a commander to direct forces provided him to accomplish specific missions or tasks that are usually limited by function, time, or location; to deploy units concerned; and to retain or assign separate employment of components of the units concerned. It does not, of itself, include administrative or logistics control.

operational logistics — An essential sustainment operation that takes the means of war and MOOTW from the theater base to the CZ in the right quantity, at the right time. Per the CINC's priority, it includes reception of material, port handling, storage, transportation, maintenance, disposal of property, and related training.

OPLAN — operations plan

OPORD	operations order
OPSEC	operations security
ORF	operational readiness float
overhaul	To restore an item to a completely serviceable condition as prescribed by maintenance serviceability standards.

P

PA	public affairs
PACOM	Pacific Command
PAO	public affairs officer
PASE	port area support element
PASR	personnel accounting and strength reporting
PC	personal computer
PC-COTS	personal computer-commercial off-the-shelf
PCH	press camp headquarters
PI	public information
PIM	personnel information management
pipeline	In logistics, the channel of support by which materiel or personnel flow from sources of procurement to their point of use.
PLL	prescribed load list
PLS	palletized loading system
PM	provost marshal
PMC	personnel management center
POD	port of debarkation—An aerial or sea port within the theater base where the intertheater strategic transportation of forces is completed.
POE	port of embarkation—An air or sea terminal at which troops, units, military-sponsored personnel, unit equipment, and materiel are boarded or loaded to embark in a strategic deployment.
POL	petroleum, oil, and lubricants
POM	preparation for overseas movement
POMCUS	pre-positioning of materiel configured to unit sets
POS/NAV	position/navigation
PRC	populace and resources control
PRM	personnel readiness management
PS	packet switch
PSB	personnel service battalion
PSC	personnel service companies

PSS personnel service support—The management and execution of all personnel-related matters, including personnel services, administrative services, postal services, morale support activities, finance/comptroller services, health services, chaplain activities, legal services, PA, and tactical general-purpose ADP support.

PSYOP psychological operations

pull supply system A system based on requisitioning as needs are recognized.

push supply system A process of shipping items without waiting for requisitions from the combat forces.

PVNTMED preventive medicine

PVO private voluntary organization

PX post exchange

R

RAU remote-access units

RC reserve component

RCEM regional contingency engineering manager

ready-for-issue weapon An item that has been removed from preservation with all ancillary equipment—fire control, machine guns, radios, mounts, and so forth—installed. The vehicle has been fueled and basic issue items are aboard.

ready to fight A crewed, ready-for-issue weapon with ammunition stowed aboard; weapon has been boresighted and verified operational.

real property maintenance activities Actions taken to ensure that real estate is acquired, developed, maintained, and disposed of in a manner responsive to the mission.

rear area The area to the rear of the close operations area where supply, maintenance support, communications centers, and administrative echelons are located.

rear operations Operations that assist in providing freedom of action and continuity of operations, logistics, and battle command. Their primary purposes are to sustain the current close and deep fight and to posture the force for further operations.

reconstitution At the strategic level, those functions and activities required to restore the Army's full or total capability to respond to any mission across the full range of possible operations. At the operational and tactical levels, reconstitution consists of extraordinary actions that commanders plan and implement to restore units to a desired level of combat effectiveness commensurate with mission requirements and available resources.

regeneration Those replacement, reorganization, and redistribution actions necessary to restore an attrited unit that is no

	longer combat effective to the desired level of combat effectiveness.
resources	Manpower, funds, materiel, space, and time available required to accomplish specific tasks or to realize specific objectives. Included in this concept of materiel are all objects such as equipment, tools, systems, and so forth.
RISTA	reconnaissance, intelligence, surveillance, and target acquisition
ROC	rear operations center
ROE	rules of engagement
RO/RO	roll-on/roll-off
ROWPU	reverse osmosis water purification units

S

SAPO	subarea petroleum office
SECDEF	Secretary of Defense
service component command	A command consisting of the component commander and all those individuals, units, detachments, organizations, or installations under his military command that have been assigned to a combatant unified command.
SF	special forces
SFFP	smoke forward fuel point
SIDPERS	Standard Installation/Division Personnel System
SIGINT	signals intelligence
SINCGARS	single-channel ground/airborne radio subsystem
SJA	staff judge advocate
SLOC	sea lines of communication—An ocean route that connects operating military forces with a base of operations.
SMFT	semitrailer-mounted fabric tanks
SO	special operations
SOC	special operations command
SOF	special operations forces
SofA	Secretary of the Army
SOR	statement of requirements
SOTSE	special operations theater support element
SOUTHCOM	Southern Command
split-based logistics	Dividing logistics management functions so that only those functions absolutely necessary are deployed, allowing some management functions to be accomplished from CONUS or another theater.
SPO	security plans and operations

SPOD sea port of debarkation

SPOE sea port of embarkation

SSA supply support activity

STAMIS standard army management information systems

SUPCOM support command

supply point distribution A method of distributing supplies to the receiving unit at a supply point, railhead, or truckhead. The unit then moves the supplies to its own area using its own transportation.

T

TAACOM theater army area command

TACAPS Theater Army Construction Automated Planning System

TACCS Tactical Army CSS Computer System

TACON tactical control—The detailed (usually local) direction and control of movements or maneuvers necessary to accomplish assigned missions or tasks.

TACSAT tactical satellite

TALSM theater army logistics system manager

TAMCA theater army movement control agency

TAML theater army medical laboratory

TAMMC theater army materiel management center

TAMMIS Theater Army Medical Management Information System

TAMP theater aviation maintenance program

TAPDB Total Army personnel data base

TASE theater area support element

TAT to-accompany-troops

TAV total asset visibility—The intermediate availability of data pertaining to the location of materiel in storage or in transit from the provider to the requester.

TBM tactical ballistic missiles

TCF tactical combat force

TCMS Theater Construction Management System

TDA table of distribution and allowances

TDS total distribution system

TEMPER tent, expandable, modular, personnel

TFE tactical field exchange

THAAD Theater High-Altitude Area Defense System

theater base A sizable portion of the joint rear area containing logistics facilities such as PODs, marshalling areas, logistics stockage areas, movement control points, logistics

	headquarters and units, and the rear portion of the intratheater COMMZ, together with airfields and air bases, transitioning land forces, theater missile defense forces, the theater rear headquarters, and strategic reserves.
throughput distribution	Shipments that bypass intermediate activities and go directly to the user in the supply system, thereby avoiding multiple handling.
TMDE	test, measurement, and diagnostic equipment—Electronic, mechanical, hydraulic, or pneumatic equipment, either automatic, manual, or any combination thereof, that performs a checkout or calibration function.
TMMMC	theater medical materiel management center
TMO	traffic management office
TOA	transfer of authority
TOE	table of organization and equipment
TPFDL	time-phased force deployment list
TPN	tactical packet network
transportation operating agency	Generic term used to describe the transportation agencies—MTMC, Military Airlift Command, and MSC—that move personnel and cargo during peace and war.
triage	The medical sorting of patients according to type and seriousness of injury, likelihood of survival, and the establishment of priority for treatment and/or evacuation to assure medical care of the greatest benefit to the largest number. The categories are minimal—those who require limited treatment and can be returned to duty; immediate—patients requiring immediate care to save life or limb; delay—patients who, after emergency treatment, incur little additional risk by delay or further treatment; and expectant—patients so critically injured that only complicated and prolonged treatment will improve life expectancy.
TROPO	tropospheric scatter
TSE	theater support element
TTP	trailer transfer points
TWDS	Tactical Water Distribution System

U

UAV	unmanned aerial vehicle
UBL	unit basic load
UPC	Unified Command Plan
ULLS	unit-level logistics system
unified command	A command with a broad and continuing mission under a single commander and composed of significant assigned components of two or more services.

UPC	Unified Command Plan
USACE	US Army Corps of Engineers
USACFSC	US Army community and family support center
USACIC	US Army Criminal Investigation Command
USAID	US Agency for International Development
USAINSCOM	US Army Intelligence and Security Command
USAISC	US Army Information Systems Command
USAMC	US Army Materiel Command
USAMMA	US Army Medical Materiel Agency
USASOC	US Army Special Operations Command
USPFO	US Property and Fiscal Office
USTRANSCOM	United States Transportation Command
UW	unconventional warfare

V

VHD	veterinary headquarters detachments
VMD	veterinary medicine

W

WAN	wide area network
WCM	wartime construction management
weapons of mass destruction	Weapons that through use or the threat of use can cause large-scale shifts in objectives, phases, and courses of actions.
weapon system	A weapon and those components required for its operation.
WMD	weapons of mass destruction
WSM	weapon systems manager

References

JOINT AND MULTISERVICE PUBLICATIONS

DOD Directive 4140.25-M. *DOD Management of Bulk Petroleum Products, Natural Gas and Coal.* June 1994.

DOD Directive 5100.69. *DOD Program for Prisoner of War and Other Detainees.* 27 December 1972.

FM 90-23/TACP 50-49/USAFEP 50-49/PACAFP 50-49/AACP 50-49. *Rear Security Operations - Army-Tactical Air Forces Procedures for Rear Security Operations at Echelons Above Corps.* 14 November 1989.

Joint Pub 1. *Joint Warfare of the US Armed Forces.* 11 November 1991.

Joint Pub 0-2. *Unified Action Armed Forces (UN..).* 11 August 1994.

Joint Pub 3-0. *Doctrine for Joint Operations.* 9 September 1993.

Joint Pub 3-57. *Doctrine for Joint Civil Affairs.* October 1991.

Joint Pub 4-0. *Doctrine for Logistics Support for Joint Operations.* 25 September 1992.

Joint Pub 4-01.3. *Joint Tactics, Techniques, and Procedures for Movement Control. 26* January 1994.

Joint Pub 4-01.7. *Joint Tactics, Techniques, and Procedures for Use of Intermodal Containers in Joint Operations.* Undated.

ARMY PUBLICATIONS

AR 27-1. *Legal Services, Judge Advocate Legal Services.* August 1994.

AR 27-10. *Military Justice.* 8 August 1994.

AR 115-11. *Army Topography.* 30 November 1993.

AR 190-8. *Enemy Prisoners of War - Administration, Employment and Compensation.* 1 June 1982.

AR 700-8. *Logistics Planning Factors and Data Management.* 30 April 1994.

AR 710-2. *Inventory Management Supply Policy Below the Wholesale Level.* 31 January 1992.

AR 750-1. *Army Materiel Maintenance Policy and Retail Maintenance* Operations. 1 August 1995.

AR *750-25. Army Test, Measurement and Diagnostic Equipment (TMDE) Calibration and Repair Support Program.* 1 September 1983.

AR 750-43. *Army Test, Measurement, and Diagnostic Equipment Program.* 29 September 1989.

DA Pam 608-47. *Family Support Groups.* 16 August 1993.

FM 1-100. *Doctrinal Principles for Army Aviation in Combat Operations.* 28 February 1989.

FM 1-500. *Army Aviation Maintenance.* 24 July 1989.

FM 3-3. *Chemical and Biological Contamination Avoidance.* 16 November 1992.

FM 3-4. *NBC Protection.* 29 May 1992.

FM 3-4-1. *Fixed Site Protection.* 16 August 1989.

FM 3-5. *NBC Decontamination.* 17 November 1993.

FM 3-50. *Smoke Operations.* 4 December 1990.

FM 3-100. *NBC Defense, Chemical Warfare, Smoke and Flame Operations.* 23 May 1991.

FM 3-101. *Chemical Staffs and Units.* 19 November 1993.

FM 5-104. *General Engineering.* 12 November 1986.

FM 5-105. *Topographic Operations.* 30 September 1993.

FM 5-116. *Engineer Operations: Echelons Above Corps.* 7 March 1989.

FM 6-20-30. *Tactics, Techniques and Procedures for Fire Support for Corps and Division Operations.* 18 October 1989.

FM 8-10. *Health Services Support in a Theater of Operations.* 1 March 1991.

FM 8-10-4. *Medical Platoon Leader's Handbook - Tactics, Techniques and Procedures.* 16 November 1990.

FM 8-10-5. *Brigade and Division Surgeons' Handbook for Tactics, Techniques and Procedures.* 10 June 1991.

FM 8-10-19. *Dental Service Support in a Theater of Operations.* 12 May 1993.

FM 8-55. *Planning for Health Service Support.* 9 September 1994.

FM 8-285. *Treatment of Chemical Agent Casualties and Conventional Military Chemical Injuries.* March 1993 (Draft).

FM 9-6. *Munitions Support in Theater Operations.* 1 September 1989.

FM 9-59. *Unit Operations for Air Defense and Land Combat Weapons Systems.* 8 March 1994.

FM 10-1. *Quartermaster Principles.* 11 August 1994.

FM 10-23. *Basic Doctrine for Army Field Feeding.* 12 December 1991.

FM 10-27. *General Supply in Theaters of Operations.* 20 April 1993.

FM 10-52. *Water Supply in the Theaters of Operations.* 11 July 1990.

FM 10-63. *Handling of Deceased Personnel in Theaters of Operations.* 25 February 1986.

FM 10-63-1. *Graves Registration Handbook.* 17 July 1986.

FM 10-67. *Petroleum Supply in a Theater of Operations.* 10 October 1985.

FM 10-280. *Mobile Field Laundry, Clothing Exchange and Bath Operations.* 22 October 1986.

FM 10-500-1. *Airdrop Support Operations in a Theater of Operations.* 19 June 1991.

FM 11-45. *Signal Support: Echelons Above Corps (EAC).* April 1993.

FM 12-6. *Personnel Doctrine.* 9 September 1994.

FM 14-6. *Resource Management Operations.* 29 September 1994.

FM 14-7. *Finance Operations.* 17 August 1994.

FM 19-1. *Military Police Support for the AirLand Battle.* 23 May 1988.

FM 19-4. *Military Police Battlefield Circulation Control, Area Security and Enemy Prisoners of War Operations.* 7 May 1993.

FM 27-100. *Legal Operations.* 30 September 1991.

FM 33-1. *Psychological Operations.* 18 February 1993.

FM 34-37. *Echelon Above Corps Intelligence and Electronic Warfare Operations.* 15 January 1991.

FM 34-60. *Counterintelligence.* 5 February 1990.

FM 34-130. *Intelligence Preparation of the Battlefield.* 8 July 1994.

FM 41-10. *Civil Affairs Operations.* 11 January 1993.

FM 44-71. *ADA Brigade Operations* (Final draft).

FM 44-94. *AADCOM Operations.* 1 November 1994.

FM 55-1. *Army Transportation Services in a Theater of Operations.* 30 November 1984.

FM 55-10. *Movement Control in a Theater of Operations.* 8 December 1992.

FM 55-50. *Army Water Transport Operations.* 30 September 1993.

FM 55-60. *Army Terminal Operations.* 18 May 1987.

FM 63-3. *Corps Support Command.* 30 September 1993.

FM 100-5. *Operations.* 14 June 1993.

FM 100-7. *Decisive Force: The Army in Theater Operations.* 31 March 1995.

FM 100-8. *The Army in Multinational Operations.* To be published.

FM 100-9. *Reconstitution.* 13 January 1992.

FM 100-10. *Combat Service Support.* 18 February 1988.

FM 100-17. *Mobilization, Deployment, Redeployment and Demobilization.* 28 October 1992.

FM 100-17-1. *Army Pre-Positioned Afloat.* To be published.

FM 100-19. *Domestic Support Operations.* 1 July 1993.

FM 100-22. *Installation Management.* 11 October 1994.

FM 100-23. *Peace Operations.* 30 December 1994.

FM 100-25. *Doctrine for Army Special Operations Forces.* 12 December 1991.

FM 100-37. *Terrorist Counteraction.* 24 July 1987.

Army Federal Acquisition Regulation Support Manual. 1 April 1988.

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By Order of the Secretary of the Army:

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